PUBLIC HEALTH REPORTS

VOL. 39. MARCH 28, 1924. No. 13

EPIDEMIC OF TYPHOID FEVER AND OTHER INTESTINAL DISEASES IN EVERETT, WASH., JULY, 1923.

By C. E. Dorisy, State Sanitary Engineer.

Everett, Wash., a seaport of approximately 30,000 inhabitants, obtains its water from the Sultan River, a mountain stream, through a long wood-stave pipe line. In 1922, as a result of floods, forest fires, and breaks in the pipe-line, contamination began to occur frequently in the water; and, upon the order of the State Health Department, the city commissioners installed two Wallace & Tiernan chlorinators at the intake. Since that time, the water has been of good sanitary quality, as shown by the following bacteriological averages found in the State laboratory:

B. coli per 100 c. c	0
37° C.: Bacteria per c. c	5
20° C.: Bacteria per c. c	145

On or about July 12, 1923, numerous cases of diarrhea began to appear in the Riverside district, along Pine, Maple, Cedar, Walnut, and Chestnut Streets. The area extended gradually, until a large portion of the city became involved. The prevalence of the disease soon gave rise to a rumor that the city water was contaminated, and prompted the acting local health officer (the health officer being on leave of absence at that time) to consult with the water superintendent concerning the possible contamination of the city water.

That official had already, as a matter of routine, caused to be analyzed in a commercial laboratory of Everett, several samples of water taken from the business section of the city. They were reported as contaminated in every 10 c. c. portion of sample. Previous analyses of samples of chlorinated water from the reservoir had shown that the water at that place was satisfactory, and the possibility of contamination after chlorination had not been considered.

Up to this time none of the cases of intestinal trouble had appeared to be serious enough to warrant reporting to the State Board of

Health. However, on July 17 four samples of the city water, collected from various taps in the Riverside district, were forwarded to the State laboratory. The reasons for forwarding the samples were not stated, and the department was not aware that an outbreak of intestinal trouble was under way in Everett.

On July 20, the State Board of Health was informed by telephone by a local physician, a former member of the State Board of Health, that a considerable number of diarrhea cases were occurring in his practice. The State Board of Health immediately communicated with the city authorities of Everett, who stated that reports had been heard of a few scattered cases of diarrhea of a mild type, but that there was no cause for concern as such cases were not unusual at that season of the year.

On July 23 this physician reported that the situation was growing serious and requested that some one be sent to Everett as soon as possible to determine the cause of this sickness.

On the morning of July 23 the analyses of the four samples collected in Everett on the 17th were completed and showed the following results:

Laboratory No.	Tap where collected.	B. coli per 100 c. c.	37° C.: Bact. per c. c.	20° C.: Bact. per c. c.
W 564	2306 Harrison Street	100	375	7,000
W 562	3130 Maple Street	100	130	675
W 561	3202 Maple Street	100	160	1,700
W 563	3311 Pine Street [1]	1,000	8,000	10,000+

[1] The nearest point to the 6-inch connection described below.

The same day (July 23) Dr. Paul A. Turner, director of health of the State of Washington, Dr. A. U. Simpson, epidemiologist, and the writer, proceeded to Everett to investigate the outbreak.

It was ascertained that although the epidemic had already spread in a milder form to the business section of the city, it had its origin in the Riverside district, on the banks of the Snohomish River, and that many of the workers in the numerous mills located in that vicinity were already affected by it.

As a number of the mills in the Riverside district along the Snohomish River were provided with dual fire protection systems which enabled them to run the polluted water of the river and the chlorinated water from the reservoir into a common main in case of fire, the investigators immediately suspected that the drinking water was being polluted by river water which gained access to the drinking water mains through a faulty cross-connection.

The opinion that local contamination was occurring following chlorination was borne out by the analyses of samples of water col-

lected by the State Board of Health on July 23. The analyses were as follows:

Laboratory No.	Source of sample.	B. coli per 100 c. c.	37° C.: Bact. per c. c.	20° C.: Bact. per c. c.
W 594	Reservoir inlet	0	7	8
W 597	Reservoir No. 2	2	21	1
W 596	Faucet, 1316 Grant Avenue	0	3	105
W 598	Running faucet, 2318 Cleveland	100	60	200
W 599	3218 Maple	1,000	3,700	6,900
W 595	Eclipse Mill, drinking fountain	1,000	130	650

A glance at the city map showed that cases of the disease were most numerous in the vicinity of the Eclipse Mill, in which cross-connections of the character above described were present. The Eclipse Mill, therefore, was made the starting point of a general investigation which lasted three days and established the following facts:

For the purpose of improving their means of combating fire, the Eclipse Mill Co. had, during the first part of 1923, requested the city commission to lay an additional 6-inch main connecting a dead end at Thirty-third and Pine Streets with an existing hydrant located on the Northern Pacific Railway tracks, in a city block adjacent to the mill.

On March 19, 1923, the city commission had authorized this work, which was completed during the first days of July, when the chlorinated city water was permitted to flow through the new main. A gate valve installed on this new line was kept open because, as the water superintendent said, "the water department wanted to get the benefit of the circulation system." For the same reason, no check valve was installed there at that time.

On July 10, 1923, and in connection with some dredging operations conducted on the Snohomish River, a pump of a capacity of 1,000 gallons per minute (part of the Eclipse dual fire-protection system) was put into service by the mill company. The suction of this pump was located on the Snohomish, in tidewater, between the outfalls of 60-inch and 36-inch sanitary trunk sewers draining the same bank of the stream. In 1906, a by-pass had been laid around the meter by the water department to connect this pump with the city water mains. A gate valve was at that time installed on the by-pass; but for some time previous to the epidemic it had been kept open, which, however, was of no great consequence until the new 6-inch connection mentioned above was made, as the only danger then existing was the pumping of contaminated water into a dead end never used for drinking purposes.

The mill pump delivered water under a pressure of approximately 95 pounds; whereas, on account of some repairs being made at the

reservoir, the pressure in the city mains was unusually low at the time of the epidemic (82 pounds on July 23).

The map at the water department's office did not show the recently completed 6-inch connection, of which no permanent record had apparently been made previous to its construction. For that reason, a defective check valve was at first assumed to be the cause of the trouble, but the testing of both gate valves and check valves failed to reveal any mechanical defect. This, however, was not conclusive, as a chip or pebble which might have prevented the functioning of a check valve could have later been crushed or dislodged through variations of pressure, thus permitting the valve to close again.

In the meantime the following measures were taken with the cooperation of the local health, water, fire, and police departments, which the city commission had placed at the disposal of the sanitary engineer:

(1) The drinking fountains in the district affected were closed and barrels of ice water sterilized with calcium hypochlorite were at once supplied for the use of the mill workers.

(2) The dose of liquid chlorine introduced at the intake was increased to 4 pounds per million gallons.

(3) The fire department started a systematic and intensive flushing of the mains, the result of which was controlled by daily bacteriological tests. This flushing was carried on until all the samples from the various parts of the city showed the complete absence of *B. coli* and a very low bacterial count.

(4) Notice to boil the water was published daily in the local papers.

(5) Several contaminated wells and springs from which many residents were carrying their water were placarded or closed.

(6) An inspection was made of all the mills along the river and it was ascertained that the cross-connections at these various establishments were in good order. The manager of each plant was given the necessary instructions regarding the precautions to be taken against intestinal diseases, which, up to that time, consisted only of diarrhea and dysentery.

On July 24 the engineer of the Eclipse Mill Co. informed the State authorities of the 6-inch connection recently installed by the city and mentioned the fact that the large pump at the mill had for some time been "running faster than usual." Further investigation verified this statement and disclosed that the connection really afforded the means by which large quantities of polluted water had for 14 days entered the city mains. The connection was immediately ordered shut off and sealed.

On July 25 the first case of typhoid fever was reported to the local health officer, and in all, 77 cases were reported, the last contact cases occurring in the latter part of October. This total includes

one case at Raymond, Wash., and one in Tacoma, which were traced to the same source. At least 2,000 cases of diarrhea and dysentery were also due to this pollution of the water mains.

That the infection was severe is shown by the case fatality rate in this epidemic, there having been nine deaths from typhoid and two from dysentery.

As a result of the epidemic, the department issued the following order, dated July 30, 1923, and addressed to the mayor of Everett:

"Therefore, in virtue of section 5406 R. and R. Code, it is the order of this department—

"(1) That all check valves now in use for the purpose stated above (dual systems of fire protection) shall be immediately eliminated.

"(2) That all gate valves on dual systems shall immediately be sealed, it being understood that if such gate valves must be opened in a fire emergency, the person breaking this seal shall forthwith report the fact to the city health officer.

"(3) That the sealing of the gate valves shall be considered sufficient only for a period not exceeding 90 days from date, after which each mill shall be provided with an individual water tank, in order that even the gate valves may be eliminated.

"(4) That the city department of health shall be given absolute control over the chlorination of the water supply.

"(5) That the water superintendent shall not be permitted to construct any extensions to the water system without first submitting to the State Board of Health or to the city of Everett department of health, plans showing the transmission and distribution system for such an extension. (Sec. 70–d, State Board of Health, Rules and Regulations.)"

On January 14, 1924, the State Board of Health passed the following regulation prohibiting the use of cross-connections for any purpose unless both water supplies are of safe sanitary quality and the connection has received the approval of the State Board of Health.

WASHINGTON STATE DEPARTMENT OF HEALTH.

REGULATION PROHIBITING WATER CROSS-CONNECTIONS.

SECTION 70 (*k*) For the purpose of this regulation, a cross-connection is a physical arrangement whereby a public water-supply system is connected with another water-supply system, either public or private, in such a manner that a flow of water into such public water-supply system from such other water-supply system is possible.

(*l*) For the purpose of this regulation, a by-pass is a physical arrangement whereby water may be diverted around any feature of the purification process of a public water supply.

(*m*) For the purpose of this regulation, an emergency intake is an intake or other device capable of introducing water into the public

water system from a source of supply which, because of its unsafe characteristics, has not been approved for drinking and culinary purposes by the State Department of Health.

(*n*) All cross-connections are hereafter prohibited within the limits of the State of Washington unless both water supplies are of safe sanitary quality, and both supplies and the connection thereof have received the approval of the State Department of Health. All persons, firms, or corporations now having or maintaining any cross-connections as defined in paragraph (*k*) of this section, whether or not such cross-connections are controlled by automatic devices such as check valves, or by hand-operated mechanisms, such as gate valves or stop cocks, which may or may not be sealed, shall, on or before the 15th day of April, 1924, discontinue and physically separate all such cross-connections, unless both supplies and the connection thereof have received the approval of the State Department of Health.

(*o*) Failure on the part of persons, firms, or corporations to discontinue the use of any and all cross-connections and to physically separate such cross-connections before the 15th day of April, 1924, will be sufficient cause for the discontinuance of the public water service to the premises on which the cross-connections exist, unless the quality of the water from the two supplies used has been approved by the State Department of Health.

Provided, that, in the case of persons, firms, or corporations having installed before April 15, 1924, cross-connections consisting of two gate valves with indicator posts, two check valves of the factory mutual type with drip cocks and gauges for testing, all to be placed in a vault of water-tight construction accessible to ready inspection; the date of discontinuance of the same shall be extended until January 1, 1927: Provided further, that such cross-connections are subjected to such inspections as the State Department of Health deems proper, the expense of such inspections to be borne by the person, firm, or corporation using such a cross-connection.

(*p*) After January 1, 1927, public water supplies shall be made available for fire protection by the following methods only:

1. Construction of a pump well, or reservoir, to which the city mains are connected, pumps taking suction from well or reservoir and pumping to an elevated tank for storage and pressure; or

2. An elevated tank or standpipe supplied at the top and above the overflow by a connection from the city main. Such tank or standpipe may then be connected to the fire-protection system; or

3. Two independent systems or piping without any connection whatsoever, one being supplied from the city mains and the other from the independent water supply.

(*q*) No by-pass shall be established or maintained whereby water may be diverted around any feature of a purification process of a

public water-supply system, provided that with the specific approval of the State Department of Health, by-passes may be permitted around primary sedimentation basins, aerators, or mixing chambers.

(*r*) No emergency intake as defined in paragraph (*m*) of this section shall be established or maintained in connection with a public water-supply system.

THE EFFECT OF CHARA ROBBINSII ON MOSQUITO LARVÆ.

By M A. Barber, Special Expert, United States Public Health Service.

The publications of Caballero on a supposed toxic effect of *Chara fœtida* and of other species of *Chara* on mosquito larvæ have, of late years, aroused considerable interest respecting the possible use of these plants in the prevention of the breeding of *Anopheles*.

According to Caballero (1, 2, 3, 4) various pools and ponds occurring in certain regions of Spain did not harbor mosquito larvæ if *Chara fœtida* grew abundantly in them, whi'e pools lacking these plants contained larvæ plentifully. Larvæ of *Anopheles* and of *Aëdes ægypti* developed poorly or not at all in aquaria containing *Chara*, but grew normally in controls. Larvæ developed in the crushed thallus of the plant, but failed to grow normally in water taken from pools in which *Chara* was growing. The author concluded that the harmful effect of *Chara* on larvæ was due to some toxin excreted by the living plant. Not only *Chara fœtida* but also other species of *Chara* common in Spain produced this toxic effect.

Pardo (5), working in the rice fields of Valencia, reported that he had confirmed the theory of the value of *Chara* in destroying mosquito larvæ; that *Chara hispida* has a stronger larvicidal power than *Chara fœtida* and is more suitable for propagation, since it may live at the bottom of water 10 ft. in depth. Alluaud (6) made a study of the use of *Chara* in antimosquito work in Morocco. He concluded that this plant does not bring about a complete elimination of mosquitoes, but that its use is a very valuable accessory control measure. He found no mosquito larvæ in the presence of *Chara connivens*. Vasconcelos (7) experimented with *Chara gymnophylla* in Mexico and concluded that this species has some toxic effect on mosquito larvæ. Officers (8) engaged in antimalaria work in Palestine have reported the finding of both *Culex* and *Anopheles* larvæ in ponds where *Chara fœtida* was growing luxuriantly. Hacker (9) experimented on two species of *Chara* in the Federated Malay States and found that larvæ pupated normally in dishes containing these plants. A third species, however, seemed to act as a deterrent to mosquito breeding. Galamini (10) states that larvæ of *Anopheles bifurcatus* in Italy may hibernate in collections of water containing *Chara fœtida*.

Some 50 species of *Chara* have been reported by Robinson (11) as occurring in North America; and of these, 36 species have been found in the United States, some of them abundantly. Little has been published regarding a possible larvicidal power of any species indigenous to this country. Metz (12) states that *Chara* is a relatively poor food for *Anopheles* larvæ, but that one specimen of *Anopheles quadrimaculatus* developed to maturity in it. Smith (13) found larvæ of *Anopheles punctipennis* in great numbers in fruiting *Chara*. Rucker (14) states that *Chara foliorosa*, growing abundantly in lakes of the Isthmus of Panama, has no inhibitory effect on the larvæ of *Anopheles albimanus*. On the contrary, it stimulates mosquito production. (*Chara foliorosa* is not listed by Robinson. *C. foliolosa* Muhl. is listed, with a distribution "Pennsylvania to South America.")

An opportunity was offered to make some observations on a local species of *Chara* by the appearance, in early August, 1923, of large amounts of *Chara robbinsii* Halstead [1] in the rice plots of the Rice Experiment Station at Crowley, La. This species was very plentiful at the margins of rice plots, within plots where the rice was short, and in pools and ditches near the rice. It was especially abundant where the water was exposed to the sun. It was fruiting freely, had a strong odor, and was often so thick as to form mats at the surface of the water. Larvæ of *Anopheles* and of various culicines could be found everywhere in the presence of this *Chara*. An attempt was made by dipping, to determine approximately the number of anopheline larvæ found in the presence of the *Chara*. A pan of about $1\frac{3}{4}$ quarts' capacity was used, and each dip swept larvæ from a surface averaging roughly 50 square inches. An average of nearly 1,000 dips made in water containing *Chara* gave nearly one (0.8) anopheline larvæ per dip. Over 100 control dips made where *Chara* was not present, or present in very small quantity, gave an average of 0.7 anopheline larvæ per dip. Pupæ and larvæ of all sizes were found with the *Chara* and were especially abundant where the matted plant extended slightly above the surface of the water, affording more abundant food for the larvæ and more adequate protection against minnows. In such mats sometimes 4 or 5 larvæ could be taken at one dip.

Anopheline larvæ were also plentiful in ditches where *Chara* was very thick and in a pool where the water was not changed in the course of irrigation. In one plot of the Experiment Station the rice remained short throughout the summer and *Chara* was continually abundant all over it. Here anopheline larvæ averaged somewhat over one per dip. Anopheline larvæ in the presence of *Chara* were found in

[1] Specimens were identified by Mr. W. C. Purdy, Special Expert United States Public Health Service, and by Dr. W. R. Taylor of the Department of Botany, University of Pennsylvania.

various other rice fields in the neighborhood of Crowley, and in none of them was there any evidence of a harmful effect produced by the plant on mosquito larvæ.

Many laboratory experiments were done in aquaria varying in size from teacups to battery jars of 5 to 6 quarts capacity. The quantity of *Chara* tested in them varied in amount from a sprig or two to a mass nearly filling the container. *Chara* fresh from the field and that which had grown in the container for weeks was tested. In all, anopheline larvæ grew well, in many experiments from egg to adult, provided sufficient food was supplied them. *Anopheles* also developed to adults from eggs, or from larvæ just hatched, in an extract of green *Chara* crushed in a mortar and in the dried powdered plant. Washed and crushed oöspores of *Chara* were fed to anopheline larvæ. Fragments of oöspores, recognized by the large starch grains present in them, were found in the feces of the larvæ, proving that the oöspores had been ingested. No apparent harm resulted to the larvæ from this diet. *Anopheles* escaped in the laboratory laid eggs in a large container in which there had long grown an abundance of thriving *Chara*, and the eggs developed to imagoes. Food and temperature conditions being equal, there seemed to be no difference between the growth rate of *Anopheles* larvæ in *Chara*-containing aquaria and that observed in controls containing various other plants.

In cultures in which the *Chara* remained green and freshly growing, larvæ often developed slowly and frequently died out, provided their food supply was not supplemented. But if small quantities of rotten *Chara*, *Spirogyra*, or any decomposing plant were placed on small floats within convenient reach of the larvæ, the mosquitoes throve well, notwithstanding the presence of the green *Chara* in the container. *Chara* alone, unless partly rotting, was apparently a poor source of food for larvæ, not furnishing a sufficient supply of disorganized plant cells or of microorganisms to support the larvæ properly. Certain other water plants, more or less tough in texture, were equally inhospitable. It is hardly conceivable that the products of decay formed by the small amounts of decomposing plants placed on the floats in our *Chara*-anopheline cultures could interfere with a toxic action of the green *Chara*. At all events, such products of decay are common under field conditions and would be quite as likely to interfere there with any toxic action of *Chara* when used in anti-anopheline work.

Chara alone proved an excellent culture medium for mosquito larvæ when enough of it was placed in a receptacle so that a portion of it would rot. *Anopheles quadrimaculatus* developed from egg to imago in this medium in 11 days, summer temperature, counting time from the night of oviposition to that during which imagoes

were formed. Part of the *Chara* remained fresh and living, as proved by its green color and by the microscopic examination of the thallus in which the rotation of the protoplasm could be observed. In some of our cultures a comparatively tough pellicle, largely bacterial in composition, formed and hindered the development of larvæ, especially of the newly hatched ones. *Chara*, however, seemed less likely to produce such pellicles than other plants used as controls. In the mixtures of rotting and green *Chara* a thick pellicle usually formed, but soon broke, allowing free admission of air and abundant food for the larvæ.

All three of the species of *Anopheles* common in this region, *A. quadrimaculatus*, *A. crucians*, and *A. punctipennis*, developed from egg to imago in *Chara*-containing cultures. *Aëdes ægypti* developed imagoes within 16 days from eggs placed in a large beaker containing an abundance of green *Chara* and a few rotting leaves. *Culex quinquefasciatus* also developed normally in *Chara* cultures.

In all, over 50 laboratory experiments were done, and in none of them was there any evidence of the production by *Chara* of a toxin or of other substance harmful to mosquito larvæ. The mixture of living and rotting *Chara* proved to be such a good culture medium that we used it as a routine for developing mosquito larvæ.

Two species of *Nitella*, *N. gracilis* (Sm.) Ag. and *N. tenuissima* (Desv.) Kütz.[2], occurred in considerable amount in rice fields and ditches in this region. Neither in the field nor in the laboratory did this genus, a member of the *Characeæ*, show any evidence of harmful influence on mosquito larvæ.

SUMMARY.

It is evident that whatever larvicidal power may be possessed by some species of *Chara*, this property is not common to the whole genus. It is recommended that in any test of the possible larvicidal effect of *Chara*, or of any other plant, the food requirements of the larvæ should be taken into consideration.

REFERENCES.

(1) Caballero, Arturo.: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1919. Vol. 19, pp. 449–455.
(2) ———: Anales d. Inst. Gen. y Téch. d. Valencia. 1920, Vol. 7, pp. 5–17.
(3) ———: Revista de Hig. y de Tuberculosis. Valencia. September, 1920, p. 15.
(4) ———: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1922. Vol. 22, pp. 61–64.
(5) Pardo, L.: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1923, Vol. 23. pp. 154–157.
(6) Alluaud, C.: Bull. Soc. Sci. Nat. Maroc. 1922, Vol. 2, pp. 3–6.
(7) Vasconcelos, Angel Brioso: Am. Jour. Pub. Health. 1923, Vol. 13, pp. 543–546.

[2] Specimens were identified by Dr. Marshall A. Howe, curator of the New York Botanical Garden, New York City.

(8) Proc. Sixth Meeting Anti-malaria Advisory Commission, Palestine. Nov. 30, 1922.
(9) Hacker, H. P.: Supp. to F. M. S. Govt. Gaz. July 27, 1923, pp. 16–22.
(10) Galamini, A.: Ann. d'Igiene. 1923, Vol. 33, pp. 627–639.
(11) Robinson, Charles B.: The Characeæ of North America. Bull. N. Y. Botan. Garden. Vol. 4, No. 13. 1906.
(12) Metz, C. W.: Pub. Health Rep., 1919. Vol. 34, No. 32, pp. 1783–1791.
(13) Smith, Cora A.: Psyche. 1914. Vol. 21, pp. 1–19.
(14) Rucker, William Colby: The Nation's Health. 1924. Vol. 6, No. 1, p. 18.

WORK OF THE MADISON COUNTY (ALA.) HEALTH DEPARTMENT.

The annual report of the Madison County (Ala.) Health Department for the calendar year 1923 presents a striking example of the work of a reasonably adequate and highly efficient whole-time county health service. Accurate morbidity and mortality records have been kept since the establishment of the health department in 1918, and these records picture the actual results which the health department is securing, measured by lives saved and sickness prevented.

Vital Statistics.—The following death rates per 1,000 population have been recorded for the county for the years 1916 to 1923, inclusive:

1916	19.6	1920	15.0
1917	19.0	1921	12.6
1918	26.2	1922	13.6
1919	15.4	1923	14.3

The death rate for the white population only for 1923 was 12.5 per 1,000; the colored rate, 17.0.

Attention is called to the fact that there has not been an epidemic of any of the contagious diseases (excepting influenza) since the establishment of the county health department. This is attributed to improved sanitary conditions, prompt reports of notifiable diseases by practicing physicians, and proper measures of control, as regards both the patient and general measures. The following table gives the number of notifiable diseases reported from 1917 to 1923:

	1917	1918	1919	1920	1921	1922	1923
Typhoid fever	120	69	61	50	57	58	51
Tuberculosis (new cases)		70	37	39	33	35	43
Diphtheria		60	43	101	117	123	81
Scarlet fever		76	138	33	31	32	13
Smallpox		8	37	30	37	122	5
Influenza		25,000	826	955	10	30	24
Syphilis			149	158	155	109	116
Gonorrhea			112	209	163	191	224

Sanitation.—There are approximately 13,000 homes in Madison County, 9,120, or 70 per cent, of which have sanitary toilets. Every home in the towns of Huntsville, Gurley, and Madison has a sanitary toilet, and there are three rural communities in which every home is provided with a sanitary toilet. Every school in the county is furnished with sanitary toilets and improved water supplies.

The four pumping stations that supply water to Huntsville and three mill villages are constantly supervised by the health department.

Sanitary inspections of all food-handling establishments were made during 1923 and their scores were published at least once a month. Improvement in garbage collection was made in Huntsville. All garbage is now required to be placed in covered cans, and daily collections are made on every street.

Milk supply.—Early in 1923 an effort was begun to get the dairymen to improve their methods of handling milk. As a result, the city of Huntsville passed the State's model milk ordinance, with the sanction of the dairymen. Since the passage of the ordinance, Huntsville has secured the services of a veterinarian as meat and milk inspector. During the year 42 milk supplies were radically improved, 400 dairy inspections were made, and 3,000 cows were tested for tuberculosis.

Meat supply.—All meat sold in Huntsville and the police jurisdiction is killed at the city abattoir and is inspected by the meat and milk inspector, who also inspects meat markets, the scores of which are published once a month.

Malaria control.—Malaria-control work has been carried on under the supervision of the sanitary inspector, and seven surveys have been made by the consulting sanitary engineer from the State board of health. Screening of homes, drainage of mosquito-breeding places, where feasible, and oiling or stocking with top minnows where drainage was impossible were all employed.

Ordinances prohibiting mosquito-breeding places were passed in Huntsville, Gurley, and Madison, and the enforcement of these ordinances was very effective. The following is a list of the malaria control activities for the year 1923:

Miles of new ditching	9¾
Miles of clearing and brushing	6¼
Miles of maintenance of ditches	4
Square yards of oiling per week	20,503
Places stocked with *Gambusia*	6
Number of newspaper articles	12
Number of conferences	700
Number of field demonstrations	400

Laboratory.—It is stated that all the physicians throughout the county availed themselves of the services of the laboratory in aiding

them in making diagnoses, and that hundreds of specimens of milk and water from every section of the county were examined during the year. The bacteriologist of the department also performs the duties of statistician and secretary to the health department.

Child hygiene and school health work.—By no means least among the activities of the health department was the work relating to child health. This work consisted of health lectures, physical examinations, and correction of defects, after examination notices were sent out to the parents informing them of the defects found in their children and urging them to have these defects corrected. Follow-up by the nurses and classroom charts aided in the success of this work. The following table gives a summary of this work and the results accomplished:

Schools visited	42
Number of children examined	7,546
Number found defective	5,350
Defects corrected	1,546

Maternity and infancy work.—A maternity and infancy nurse was added to the personnel of the department of health during 1923, and an automobile was provided for her by the civic and women's clubs of Huntsville. During the year 113 "better baby" clinics were held in various sections of the county. The following table summarizes this work:

Prenatal—	
Cases given advice	490
Home visits	617
Infant and preschool—	
Babies and children examined	1,719
Office consultations, mothers	206
Home visits	2,882
Miscellaneous nursing visits	8,346

Venereal disease control.—The venereal disease clinic is supported by the bureau of venereal disease control of the Alabama State Board of Health. It is open daily from 2 to 5 p. m. Treatments are given free of cost to indigent patients and to prisoners. Lectures are given, motion pictures are shown, and literature is distributed in an effort to educate the people concerning the importance of stamping out venereal diseases.

During the year 950 patients were treated for syphilis and 1,066 for gonorrhea; 1,100 doses of arsphenamine and 2,154 other treatments were given.

Other activities.—An educational program was carried on throughout the year to acquaint the people with the services of the health department, to teach school children and teachers health rules, to teach proprietors of food-handling establishments how to handle foods in a sanitary manner, and to teach "health" to the public. In

this work 243 lectures were given, at which there was a total attendance of over 19,000 people; 9,446 health bulletins were distributed; and 334 newspaper articles were published. A portable moving-picture machine was purchased, and 27 shows of health films were given in various sections of the county.

Among the other activities of the department during the year were the following: Two hundred and eighty-two life extension examinations, 327 physical examinations for marriage, 276 children examined for work certificates, 1,581 complete antityphoid inoculations, and 942 smallpox vaccinations.

This work was done in a county of 811 square miles area, having a population of 52,535, and at a cost as shown below:

Receipts.

Rural sanitation fund (U. S. Public Health Service)	$2, 070. 00
State	2, 619. 99
County	6, 459. 66
Municipalities	4, 813. 38
Other agencies	3, 119. 70
	19, 082. 73

Disbursements.

Salaries	13, 913. 00
Office rent	690. 00
Laboratory supplies, vaccines, etc	546. 32
Printing	221. 15
Labor	81. 38
Automobile expense (5 cars)	2, 634. 62
Miscellaneous, light, gas, telephone, etc	996. 26
	19, 082. 73

RURAL HEALTH WORK IN NEW YORK STATE.

CATTARAUGUS COUNTY DEMONSTRATION ESTABLISHES FIRST COUNTY HEALTH UNIT IN THE STATE.

The first county health unit to be established in New York State has recently been created and the first county health officer of the State appointed. These developments in rural health work are the result of the Cattaraugus County Demonstration, one of three public health demonstrations being carried out in New York, through the aid of the Milbank Memorial Fund. The other two are in the city of Syracuse and in a district of New York City, respectively. Under the authority of a recent statute enacted in New York, a county is permitted to establish its own health board and have its own health officer. Cattaraugus County is the first county to act under this law and to establish a county board of health and appoint a county health officer—the only county health officer in the State. Dr. Leverett D. Bristol, former commissioner of health of the State of Maine, was appointed to this position.

At the meeting of the Advisory Council of the Milbank Memorial Fund in November, 1923, Doctor Bristol said that the demonstration was being received with favor by the people of Cattaraugus County, that the development of the clinical services indicated the marked appreciation of these services, people coming from more than 40 miles for examination, and that the county board of supervisors had increased the county health budget from $9,300 in 1923 to $16,000 in 1924. He stated that the president of the county medical society and most of the members were in harmony with the work and that the local authorities of the towns of the county were cooperating. At the meeting of the advisory council, Mr. Homer Folks, secretary of the State Charities Aid Association, said:

"A very important phase of public health work is that connected with the schools. In approaching this problem in Cattaraugus County we were confronted with the individual school district, the logical unit of school health work, but one which is still smaller than the town or village.

"Although there was a crying need for a wider unit for the school health work in the rural districts, no provision was made by the law for either an individual district unit or a larger one. As a result, without having any law, warrant, or authority, or anything at all except the good offices of the Milbank Memorial Fund and some of its resources, there was created in Cattaraugus County an office of county superintendent of school health. Without any legal status, this official called together a few months ago the trustees of all of the rural and village schools in the county and invited them to establish a county council of school health. Under this council the trustees were to see that every child received an adequate medical examination. Fifty-three hundred of these children, living in the least accessible parts of the county, have already been examined, and letters have gone to their parents telling of the defects discovered. For the first time in this State we have here really effective county-wide harmonious administration of the health of school children."

Dr. Matthias Nicoll, jr., Commissioner of Health of the State of New York, expressed his opinion of the need for county health work as follows:

"These demonstrations come at a very opportune time in the progress of the work of the State department of health. As I have said on many a previous occasion, it is my personal opinion that under the present organization we have about reached our limit in the methods of control of disease and the improvement of health in the State of New York. It has always been necessary to administer the affairs of health in the 57 counties of the State practically from Albany. That was very important in the beginning, but, as I say, we have reached the limit of results by any such method. I think we who have had any experience in rural public health work are agreed that the only way to accomplish efficient work is by moving the direct unit of control nearer to where the work is to be done—in other words, to establish the county unit."

DEATH RATES IN A GROUP OF INSURED PERSONS.

COMPARISON OF PRINCIPAL CAUSES OF DEATH, JANUARY, 1924, JANUARY, DECEMBER, AND YEAR 1923, AND LAST QUARTER OF 1923.

The accompanying tables are taken from the Statistical Bulletin of the Metropolitan Life Insurance Co. for February, 1924. They present the mortality experience of the industrial insurance department of the company for January, 1924, January, December, and year 1923, and for the last quarter of 1923. The rates are based on a strength of approximately 15,000,000 insured persons.

The health record for this group of persons for the month of January, 1924, is auspicious, and the best ever recorded for January of any year, the death rate being 9.7 per 1,000, as compared with 10.6 for the same month last year. The comparison is even more favorable for this year than these figures indicate, as the rate for January, 1924, is based on the number of deaths occurring at all ages, whereas that for January of last year excluded infant deaths. It is stated that no business was written on infant lives during the early period of 1923, and that if the 1,120 infant deaths occurring in January of this year were excluded, the death rate, based on persons 1 year of age and over, would be 9 per 1,000, or 15 per cent below the figure for January, 1923.

Death rates (annual basis) for principal causes per 100,000 lives exposed, January, 1924, and January, December, and year 1923.

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death.	Death rate per 100,000 lives exposed.[1]			
	January, 1924.	December, 1923.	January, 1923.	Year 1923.[2]
Total, all causes	971.0	901.0	1,062.7	923.9
Typhoid fever	2.9	4.5	4.2	5.1
Measles	8.5	5.1	8.5	9.4
Scarlet fever	6.8	5.4	6.0	4.4
Whooping cough	5.7	5.6	3.8	7.4
Diphtheria	19.9	19.5	27.6	15.5
Influenza	16.1	15.5	38.4	30.2
Tuberculosis (all forms)	107.0	90.1	116.5	109.6
Tuberculosis of respiratory system	97.4	82.0	108.6	99.2
Cancer	72.3	72.3	72.9	71.5
Diabetes mellitus	17.2	14.1	20.3	15.9
Cerebral hemorrhage	65.9	65.8	73.2	61.0
Organic disease of heart	135.9	124.7	159.7	126.7
Pneumonia (all forms)	122.6	90.3	133.8	83.5
Other respiratory diseases	15.7	15.0	20.8	13.9
Diarrhea and enteritis	17.8	20.8	6.3	28.1
Bright's disease (chronic nephritis)	71.4	69.2	81.9	68.5
Puerperal state	16.8	15.9	18.2	17.6
Suicides	5.5	6.6	7.2	7.3
Homicides	5.6	6.9	7.3	7.2
Other external causes (excluding suicides and homicides)	62.3	64.0	57.6	62.7
Traumatism by automobile	12.9	17.4	11.0	15.2
All other causes	195.4	189.7	198.4	178.6

[1] With the exception of January, 1923, figures include mortality of infants under 1 year of age.
[2] Based on provisional estimate of lives exposed to risk in 1923.

Practically every important cause of death registered a lower mortality than in the corresponding month of 1923, particularly

those causes of greatest numerical importance, such as organic heart disease, which dropped from 159.7 to 135.9 per 100,000; pneumonia, from 133.8 to 122.6; tuberculosis, from 116.5 to 107; Bright's disease, from 81.9 to 71.4; cerebral hemorrhage, from 73.2 to 65.9; influenza, from 38.4 to 16.1; and diphtheria, from 27.6 to 19.9.

The cancer rate was practically unchanged from that for January, 1923.

On the other hand, apparent increases are shown for scarlet fever, whooping cough, and diarrheal diseases. These increases, however, are stated to be due entirely to deaths in infants, and, accordingly, the figures are not fairly comparable with those for a period in which infants were not included.

The following table presents the death rates among white and colored policyholders for the final quarter of the years 1923, 1922, and 1921:

Death rates (annual basis) per 100,000 persons exposed, last quarter of 1921, 1922, and 1923, compared for white and colored policyholders, for principal causes of death.

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death.	Death rate per 100,000 persons exposed.					
	White.			Colored.		
	Oct.–Dec., 1923.	Oct.–Dec., 1922.	Oct.–Dec., 1921.	Oct.–Dec., 1923.	Oct.–Dec., 1922.	Oct.–Dec., 1921.
All causes of death	720.0	748.4	771.9	1,342.0	1,258.2	1,292.8
Typhoid fever	5.0	6.2	6.6	10.7	14.1	17.1
Measles	2.3	3.1	.8	1.3	2.1	.5
Scarlet fever	4.0	4.6	5.6	1.1	2.1	.7
Whooping cough	1.7	2.2	1.3	4.5	2.9	2.2
Diphtheria and croup	19.8	26.5	32.8	5.1	10.0	17.6
Influenza	7.8	8.1	5.4	19.2	15.5	12.5
Meningococcus meningitis	.5	.4	.4	.7	[1]	.2
Tuberculosis (all forms)	75.9	81.3	83.2	220.8	216.4	239.4
Tuberculosis of respiratory system	69.5	73.6	75.1	201.9	196.6	219.8
Tuberculosis of the meninges, etc	2.6	3.3	3.0	5.8	6.0	4.6
Other forms of tuberculosis	3.9	4.4	5.1	13.2	13.8	14.9
Cancer	73.6	69.8	74.0	81.7	66.5	65.3
Diabetes	13.5	[2]	[2]	14.1	[2]	[2]
Cerebral hemorrhage; apoplexy	54.7	53.8	60.0	98.0	88.4	94.4
Organic diseases of the heart	107.3	106.1	110.0	202.1	178.0	170.4
Total respiratory diseases	59.7	67.3	68.5	123.3	125.8	122.3
Bronchitis	3.9	4.7	5.8	8.9	8.1	9.5
Broncho-pneumonia	18.6	21.2	20.1	30.1	22.9	28.9
Pneumonia (lobar and undefined)	31.1	33.4	34.5	72.1	84.4	71.2
Other diseases of respiratory system	6.1	8.0	8.1	12.1	10.5	12.7
Diarrhea and enteritis	7.1	9.6	12.6	9.8	10.7	10.8
Under 2 years	2.6	5.0	5.7	2.5	3.1	1.7
2 years and over	4.4	4.5	6.9	7.4	7.6	9.0
Acute nephritis	4.5	5.1	5.4	15.4	18.6	17.1
Chronic nephritis	58.1	63.4	61.6	113.7	104.4	110.5
Total puerperal state	14.3	15.0	15.6	25.0	22.6	25.4
Puerperal septicemia	5.7	5.3	6.0	12.3	10.5	8.6
Puerperal albuminuria and convulsions	3.3	4.0	4.0	4.7	4.5	8.6
Other diseases of puerperal state	5.4	5.8	5.6	8.0	7.6	8.3
Total external causes	72.0	66.1	63.0	122.6	101.8	91.5
Suicides	6.8	6.5	7.5	4.9	3.6	6.6
Homicides	3.4	2.2	4.5	44.9	34.3	29.6
Accidental and unspecified violence	61.7	57.4	50.9	72.8	63.9	55.0
Accidental drowning	3.4	3.0	2.4	2.2	4.3	2.9
Automobile accidents	19.0	16.4	14.4	16.3	10.7	9.5
All other and ill-defined causes of death	138.2	159.6	165.2	272.9	278.3	294.9

[1] No deaths.

[2] Not available.

The table below shows the per cent of the total amount disbursed by the company during the years 1922 and 1923 on account of deaths from certain specified causes:

Disease or condition.	Per cent of total.	
	1923	1922
All causes of death	100.0	100.0
Typhoid fever	0.7	0.8
Influenza and pneumonia	11.5	10.0
Influenza	3.4	2.7
Pneumonia (all forms)	8.1	7.3
Tuberculosis (all forms)	12.8	13.1
Tuberculosis of respiratory system	12.0	12.2
Cancer (all forms)	8.8	9.0
Cerebral hemorrhage (apoplexy)	6.8	6.7
Diseases of the heart	12.7	13.0
Chronic nephritis	7.0	7.4
Puerperal state	1.7	2.0
Total external causes	11.8	12.4
Suicides	2.1	2.0
Homicides	1.2	1.2
Accidents	8.4	9.2
Accidental drowning	.9	1.0
Traumatism by fall	.9	.9
Railroad accidents	1.0	.8
Automobile accidents	1.9	1.7
Other accidents	3.8	4.8
All other causes of death	26.2	25.6

MILK ORDINANCE HELD VALID.[1]

The Supreme Court of Arizona has held valid a milk ordinance of Yuma. The defendant violated the ordinance by offering for sale milk containing boric acid.

DEATHS DURING THE WEEK ENDED MARCH 15, 1924.

Summary of information received by telegraph from industrial insurance companies for week ended March 15, 1924, and corresponding week of 1923. (From the Weekly Health Index, March 19, 1924, issued by the Bureau of the Census, Department of Commerce.)

	Week ended March 15, 1924.	Corresponding week, 1923.
Policies in force	56, 883, 519	52, 447, 299
Number of death claims	11, 919	13, 000
Death claims per 1,000 policies in force, annual rate	10. 9	12. 9

[1] Gardenhire *v.* State, 221 Pac. 228.

Deaths from all causes in certain large cities of the United States during the week ended March 15, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, March 19, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended Mar. 15, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended Mar. 15, 1924.[2]
	Total deaths.	Death rate.[1]		Week ended Mar. 15, 1924.	Corresponding week, 1923.	
Total (65 cities)	7,501	14.4	16.0	969	959	
Akron	34			6	9	63
Albany [3]	40	17.6	25.3	2	3	44
Atlanta	90	20.6	17.1	16	9	
Baltimore [3]	230	15.3	19.1	28	33	81
Birmingham	67	17.4	14.1	17	5	
Boston	231	15.5	19.8	30	37	83
Bridgeport	39			8	8	125
Buffalo	126	12.0	16.0	14	29	59
Cambridge	32	14.9	20.1	3	9	52
Camden	39	16.1	16.4	1	6	16
Chicago [3]	696	12.3	14.7	116	101	107
Cincinnati	132	16.9	17.6	21	12	132
Cleveland	208	11.9	12.6	43	28	113
Columbus	80	15.6	18.6	5	8	48
Dallas	47	13.0	14.6	12	10	
Dayton	40	12.3	15.1	2	4	34
Denver	95			13	11	
Des Moines	35	12.6	17.0	5	2	
Detroit	269			52	61	97
Duluth	21	10.1	11.8	4	1	86
Erie	35			5	8	103
Fall River [3]	40	17.2	19.8	11	8	155
Flint	25			9	3	155
Fort Worth	29	10.2	7.6	2	4	
Grand Rapids	30	10.5	14.3	5	5	78
Houston	42			3	7	
Indianapolis	108	16.1	15.8	13	14	98
Jacksonville, Fla	40	20.4	20.3	6	1	
Jersey City	99	16.5	15.7	12	13	87
Kansas City, Kans	33	14.6	11.3	4	5	80
Kansas City, Mo	97	14.1	17.0	15	16	
Los Angeles	239			22	13	68
Louisville	74	14.9	21.2	7	15	67
Lowell	34	15.3	20.8	7	7	125
Lynn	21	10.6	15.2	5	5	127
Memphis	62	18.8	26.4	13	5	
Milwaukee	116	12.3	15.5	23	20	105
Minneapolis	86	10.7	12.6	7	18	38
Nashville [3]	65	27.5	19.1	7	6	
New Bedford	33	13.0	15.6	8	6	125
New Haven	63	18.7	18.7	6	8	78
New Orleans	165	21.0	18.8	14	14	
New York	1,614	14.0	15.5	199	177	80
Bronx Borough	214	12.8	12.1	22	20	78
Brooklyn Borough	539	12.8	14.7	68	59	73
Manhattan Borough	719	16.6	18.2	97	87	95
Queens Borough	107	10.1	12.1	9	9	49
Richmond Borough	35	14.0	17.6	3	2	55
Newark, N. J	110	12.9	15.6	9	10	42
Norfolk	37	11.8	13.1	3	8	55
Oakland	66	13.9	11.3	6	4	75
Oklahoma City	19	9.5		1		
Omaha	56	14.0	18.9	8	13	86
Paterson	30	11.1	13.4	3	5	49
Philadelphia	529	14.1	16.5	76	63	97
Pittsburgh	256	21.3	19.2	34	33	115
Portland, Oreg	67	12.6	10.5	6	4	62
Providence	90	19.3	21.5	13	11	106
Richmond	42	11.9	18.4	6	4	71
Rochester	76	12.2	12.9	3	7	24
St. Louis	246	15.8	16.9	21	26	
St. Paul	68	14.5	15.5	3	12	26
Salt Lake City [3]	39	15.8	16.9	3	2	50
San Antonio	65	17.7	18.3	15	13	
San Francisco	150	14.3	14.4	16	14	96

[1] Annual rate per 1,000 population.

[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births of 1923. Cities left blank are not in the registration area for births.

[3] Deaths for week ended Friday, March, 14, 1924.

Deaths from all causes in certain large cities of the United States during the week ended March 15, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923—Continued.

City.	Week ended Mar. 15, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended Mar. 15, 1924.
	Total deaths.	Death rate.		Week ended Mar. 15 1924.	Corresponding week, 1923.	
Schenectady	29	15.1	7.9	1	4	28
Seattle	75			4	8	39
Somerville	21	10.9	21.6	1	9	27
Spokane	25			4	0	85
Springfield, Mass	47	16.5	14.8	4	3	68
Syracuse	58	18.1	14.1	7	6	87
Tacoma	31	15.7	9.2	4	4	92
Toledo	67	12.6	13.7	12	10	114
Trenton	52	20.9	17.2	8	4	131
Utica	35	17.3	12.1	2	2	43
Washington, D. C	157	16.8	16.9	6	11	35
Waterbury	18			5	4	112
Wilmington, Del	28	12.2	12.0	3	5	65
Worcester	47	12.5	17.1	4	13	48
Yonkers	22	10.5	11.6	3	3	66
Youngstown	38	12.8	20.1	5	12	72

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT STATE SUMMARIES.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

Reports for Week Ended March 22, 1924.

ARIZONA.

	Cases.
Chicken pox	2
Diphtheria	1
Measles	45
Mumps	9
Scarlet fever	6
Smallpox	3
Trachoma	4
Tuberculosis	8
Typhoid fever	1
Whooping cough	1

ARKANSAS.

Chicken pox	58
Diphtheria	2
Hookworm disease	2
Influenza	211
Malaria	56
Measles	464
Mumps	43
Paratyphoid fever	6
Pellagra	3
Scarlet fever	4
Smallpox	9
Trachoma	3
Tuberculosis	19
Typhoid fever	1
Whooping cough	63

CALIFORNIA.

Cerebrospinal meningitis—Venice	1
Diphtheria	207
Influenza	17
Leprosy—San Francisco	1
Lethargic encephalitis:	
Berkeley	1
Los Angeles	1
San Francisco	1

CALIFORNIA—continued.

	Cases.
Measles	1,167
Poliomyelitis:	
Crescent City	1
Lemoore	1
Taft	1
Scarlet fever	252
Smallpox:	
Hermosa Beach	8
Long Beach	20
Los Angeles	111
Los Angeles County	47
Orange County	12
Pasadena	8
San Bernardino County	11
San Luis Obispo County	11
Scattering	49
Typhoid fever:	
Los Angeles	5
Orange	32
Orange County	10
Scattering	11

COLORADO.

(Exclusive of Denver.)

Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	6
Impetigo contagiosa	1
Influenza	2
Measles	242
Mumps	25
Pneumonia	2
Scarlet fever	11
Smallpox	1
Tuberculosis	

CONNECTICUT.

	Cases.
Cerebrospinal meningitis	2
Chicken pox	80
Diphtheria	45
German measles	4
Influenza	16
Lethargic encephalitis	2
Measles	263
Mumps	165
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pneumonia (lobar)	52
Poliomyelitis	1
Scarlet fever	161
Septic sore throat	3
Smallpox	6
Tetanus	1
Trichinosis	1
Tuberculosis (all forms)	35
Whooping cough	48

DELAWARE

Chicken pox	3
Diphtheria	6
Measles	6
Mumps	1
Pneumonia	7
Scarlet fever	12
Tuberculosis	2
Whooping cough	6

FLORIDA.

Diphtheria	12
Influenza	4
Malaria	3
Pneumonia	10
Scarlet fever	11
Smallpox	4
Trachoma	2
Typhoid fever	7

GEORGIA.

Chicken pox	7
Diphtheria	26
German measles	1
Hookworm disease	2
Influenza	59
Malaria	6
Measles	219
Mumps	4
Pneumonia	14
Poliomyelitis	1
Scarlet fever	2
Smallpox	5
Tuberculosis (pulmonary)	4
Typhoid fever	1
Whooping cough	3

ILLINOIS

Cerebrospinal meningitis:	
Champaign County	1
Cook County	3
De Kalb County	1
Diphtheria:	
Cook County	105
Madison County	10
Scattering	55
Influenza	45

ILLINOIS—continued.

	Cases.
Lethargic encephalitis—Cook County	1
Measles	540
Pneumonia	410
Poliomyelitis—Cook County	1
Scarlet fever:	
Cook County	170
De Kalb County	22
Kane County	16
La Salle County	13
Lake County	10
Livingston County	8
Peoria County	12
St. Clair County	12
Scattering	81
Smallpox:	
Cook County	11
Scattering	12
Tuberculosis	242
Typhoid fever	8
Whooping cough	123

INDIANA.

Cerebrospinal meningitis—Montgomery County	1
Chicken pox	109
Diphtheria	56
Influenza	34
Measles	1,026
Poliomyelitis—Vanderburg County	1
Scarlet fever:	
Dekalb County	9
Fayette County	10
Lake County	31
St. Joseph County	14
Wabash County	10
Scattering	74
Smallpox:	
Fayette County	35
Jay County	9
Marion County	84
Kosciusko County	15
Scattering	39
Trachoma—Marion County	1
Tuberculosis	13
Typhoid fever	9
Whooping cough	107

IOWA.

Diphtheria	20
Scarlet fever	51
Smallpox	14

KANSAS.

Cerebrospinal meningitis	1
Chicken pox	127
Diphtheria	41
German measles	12
Influenza	14
Measles	1,342
Mumps	284
Pneumonia	51
Scarlet fever	52
Smallpox	48
Tuberculosis	31
Typhoid fever	5
Whooping cough	132

LOUISIANA.

	Cases.
Diphtheria	19
Hookworm disease	33
Influenza	35
Malaria	4
Measles	338
Pneumonia	57
Scarlet fever	9
Smallpox	16
Tuberculosis	24
Typhoid fever	7
Whooping cough	4

MAINE.

Chicken pox	52
Diphtheria	9
German measles	23
Influenza	14
Measles	185
Mumps	63
Pneumonia	22
Scarlet fever	27
Smallpox	2
Typhoid fever	4
Tuberculosis	18
Whooping cough	39

MARYLAND.[1]

Chicken pox	191
Diphtheria	44
Dysentery	2
German measles	85
Influenza	97
Lethargic encephalitis	4
Measles	351
Mumps	48
Ophthalmia neonatorum	2
Pneumonia (all forms)	137
Scarlet fever	181
Septic sore throat	2
Tuberculosis	59
Typhoid fever	9
Whooping cough	69

MASSACHUSETTS.

Cerebrospinal meningitis	4
Chicken pox	252
Conjunctivitis (suppurative)	15
Diphtheria	163
German measles	42
Influenza	13
Lethargic encephalitis	2
Measles	983
Mumps	426
Ophthalmia neonatorum	21
Pneumonia (lobar)	118
Poliomyelitis	3
Scarlet fever	476
Septic sore throat	14
Tuberculosis (all forms)	168
Typhoid fever	4
Whooping cough	114

MICHIGAN.

Diphtheria	139
Measles	650
Pneumonia	149

[1] Week ended Friday.

MICHIGAN—continued.

	Cases.
Scarlet fever	417
Smallpox	114
Tuberculosis	53
Typhoid fever	19
Whooping cough	90

MINNESOTA.

Cerebrospinal meningitis	1
Chicken pox	104
Diphtheria	67
Influenza	2
Measles	210
Pneumonia	5
Poliomyelitis	1
Scarlet fever	277
Smallpox	97
Tuberculosis	68
Typhoid fever	4
Whooping cough	24

MISSISSIPPI.

Diphtheria	6
Scarlet fever	6
Smallpox	7
Typhoid fever	7

MISSOURI.

(Exclusive of Cape Girardeau.)

Cerebrospinal meningitis	3
Chicken pox	69
Diphtheria	58
Influenza	11
Measles	509
Mumps	128
Pneumonia	33
Scarlet fever	176
Septic sore throat	1
Smallpox	52
Tuberculosis	49
Typhoid fever	5
Whooping cough	87

MONTANA.

Diphtheria	13
Scarlet fever	27
Smallpox	31

NEW JERSEY.

Cerebrospinal meningitis	2
Chicken pox	221
Diphtheria	103
Influenza	29
Measles	590
Pneumonia	147
Poliomyelitis	1
Scarlet fever	160
Smallpox	17
Trachoma	1
Typhoid fever	11
Whooping cough	117

NEW MEXICO.

Chicken pox	23
Conjunctivitis	8
Diphtheria	9
Influenza	10

NEW MEXICO—continued.

	Cases.
Measles	228
Pneumonia	23
Scarlet fever	7
Smallpox	1
Tuberculosis	20
Whooping cough	3

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis	4
Diphtheria	114
Influenza	44
Lethargic encephalitis	1
Measles	1,677
Pneumonia	373
Poliomyelitis	2
Scarlet fever	467
Smallpox	18
Typhoid fever	15
Whooping cough	308

NORTH CAROLINA.

Cerebrospinal meningitis	2
Chicken pox	225
Diphtheria	17
Measles	2,061
Poliomyelitis	1
Scarlet fever	37
Septic sore throat	1
Smallpox	143
Typhoid fever	2
Whooping cough	380

OREGON.

Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria:	
Portland	16
Washington County	12
Scattering	14
Influenza	10
Leprosy	1
Measles	201
Mumps	14
Pneumonia	[1]6
Scarlet fever	14
Smallpox:	
Portland	15
Scattering	9
Tuberculosis	19
Typhoid fever	2
Whooping cough	10

SOUTH DAKOTA.

Chicken pox	9
Diphtheria	8
Measles	155
Pneumonia	7
Scarlet fever	53
Smallpox	4
Whooping cough	1

TEXAS.

Chicken pox	34
Diphtheria	20

[1] Deaths.

TEXAS—continued.

	Cases.
Influenza	10
Measles	480
Mumps	51
Paratyphoid fever	1
Pneumonia	21
Scarlet fever	20
Smallpox	8
Trachoma	5
Tuberculosis	17
Typhoid fever	2
Whooping cough	16

VERMONT.

Chicken pox	13
Measles	128
Mumps	7
Scarlet fever	5
Smallpox	2
Whooping cough	10

WASHINGTON.

Chicken pox	90
Diphtheria:	
Cowlitz County	12
Seattle	12
Scattering	13
Measles	409
Mumps	53
Pneumonia	2
Scarlet fever:	
Seattle	10
Spokane	11
Scattering	33
Smallpox:	
Cowlitz County	27
Spokane	31
Scattering	23
Tuberculosis	27
Typhoid fever	4
Vincent's angina—Walla Walla	1
Whooping cough	28

WEST VIRGINIA.

Cerebrospinal meningitis	1
Diphtheria	8
Scarlet fever	20
Smallpox	26
Typhoid fever	8

WISCONSIN.

Milwaukee:	
Chicken pox	39
Diphtheria	14
Measles	26
Pneumonia	9
Scarlet fever	22
Smallpox	1
Tuberculosis	11
Whooping cough	55
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	186
Diphtheria	45
German measles	8
Influenza	51
Lethargic encephalitis	1

WISCONSIN—continued.

	Cases.
Scattering—Continued.	
Measles	408
Pneumonia	45
Scarlet fever	284
Smallpox	15
Trachoma	1
Tuberculosis	32
Typhoid fever	10
Whooping cough	136

WYOMING.

	Cases.
Chicken pox	13
Influenza	1
Measles	120
Mumps	3
Pneumonia	9
Scarlet fever	1
Tuberculosis	2
Typhoid fever	4
Whooping cough	3

Reports for Week Ended March 15, 1924.

DISTRICT OF COLUMBIA.

	Cases.
Chicken pox	55
Diphtheria	7
Influenza	2
Measles	14
Scarlet fever	27
Smallpox	8
Tuberculosis	29
Typhoid fever	1
Whooping cough	11

NEBRASKA.

	Cases.
Chicken pox	19
Diphtheria	12
Influenza	2
Measles	475
Mumps	11
Poliomyelitis	1
Scarlet fever	14
Septic sore throat	1
Smallpox	4
Tuberculosis	1
Whooping cough	4

NORTH DAKOTA.

	Cases.
Chicken pox	15
Diphtheria	8
German measles	1
Influenza	1
Measles	224
Mumps	31
Pneumonia	24
Scarlet fever	43
Smallpox	1
Tuberculosis	5
Whooping cough	14

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
January, 1924.										
New Mexico		80	9	1	303	0	1	38	3	15
Oklahoma	2	57	121	44	973			59	334	49
February, 1924.										
Arizona		11			436			24	4	2
Delaware	3	24	17		11			54	1	2
Florida	3	62	29	34	815	1		11	19	48
Idaho	0	5	0	0		0	0	48	6	3
Louisiana	2	80	313	17	2,334	2	0	29	80	50
Maryland	1	137	371	1	767	0	1	570	3	30
Minnesota	3	306	6	0	1,416	0	0	1,234	277	18
Missouri	3	291	117	0	2,729	0	1	580	51	17
New Mexico	2	73	7	1	438	1	0	48	5	9
New Jersey	11	422	126	0	1,918		3	776	14	28
New York	19	1,524	634	5	9,956		12	2,760	49	131
Rhode Island	0	68	1	4	6	0		409		0
South Carolina	1	111	88	19	1,348	3	6		50	6
Vermont	0	26	0	0	736	0	0	82	11	1
Wyoming	1	7			384			21		4

RECIPROCAL NOTIFICATION, FEBRUARY, 1924.

Cases of communicable diseases referred during February, 1924, to other State health departments by departments of health of certain States.

Referred by—	Diphtheria.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.
Connecticut		1			
Illinois			1	2	
Minnesota			1	21	2
New Jersey					1
New York	1	1	1		2

MORBIDITY REPORTS FROM CITIES.

Diphtheria.—The reports from 37 States and 105 cities in all sections of the United States for the week ended March 8, 1924, show very nearly the same number of cases of diphtheria as were reported for the corresponding week of last year and very little variation from the estimated expectancy, which is based on the experience of the last nine years, excluding epidemics. The number reported by the cities gradually decreased from 1,453 cases for the week ended January 19, 1924, to 1,024 cases for the week ended March 8, 1924.

Measles.—The State health officers reported about twice as many cases of measles for the week ended March 8, 1924, as they reported for the corresponding week of the year 1923, but the number of cases reported in the 105 cities was only about 17 per cent more than were reported for the same week last year.

Scarlet fever.—Both States and cities reported more cases of scarlet fever for the week in 1924 than for the corresponding week of 1923, and an increase of about 75 per cent over the estimated expectancy was shown by the reports from the cities.

Smallpox.—Reports of cases of smallpox for the week ended March 8, 1924, indicate that vaccination has been neglected in many parts of the country. State health officers reported more than twice as many cases as they reported for the corresponding week of 1923. The number of cases reported for the week in 1924 by city health officers is more than double the estimated expectancy.

Deaths from influenza and pneumonia.—The number of deaths from these diseases reported from the 105 cities for the week ended March 8, 1924, increased somewhat over the number reported for preceding weeks, but is less than it was for the corresponding week of 1923.

City reports for week ended March 8, 1924.

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during non-epidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
NEW ENGLAND.										
Maine:										
Lewiston	1	2	0	0	0	2	0	0	2	2
Portland	21	2	2	0	0	0	18	1	2	0
New Hampshire:										
Nashua	----	1	0	0	0	0	----	1	1	3
Vermont:										
Barre	3	0	0	0	0	2	1	2	1	0
Burlington	3	0	0	0	0	0	0	4	1	2
Massachusetts:										
Boston	65	62	40	6	1	181	35	30	53	148
Fall River	6	5	4	1	0	3	4	4	3	14
Springfield	8	4	5	----	1	105	6	2	5	13
Worcester	----	3	3	1	0	7	----	9	7	28
Rhode Island:										
Pawtucket	----	1	1	0	0	0	----	4	1	11
Providence	0	12	11	0	0	3	0	7	9	93
Connecticut:										
Bridgeport	0	8	11	1	3	1	0	2	6	14
Hartford	----	9	6	0	0	25	----	1	5	44
New Haven	6	3	3	0	0	6	116	9	6	22
MIDDLE ATLANTIC.										
New York:										
Buffalo	0	18	19	1	0	41	0	10	15	23
New York	285	268	175	98	27	1,679	271	281	189	268
Rochester	12	9	1	----	1	3	9	6	13	13
Syracuse	30	7	10	0	0	57	5	6	14	55
New Jersey:										
Camden	----	3	7	0	0	0	----	10	4	5
Newark	57	21	13	8	1	66	139	13	23	36
Trenton	3	5	3	1	0	35	2	3	3	4
Pennsylvania:										
Philadelphia	173	75	89	7	6	73	0	84	59	88
Pittsburgh	88	22	29	----	10	11	105	99	19	37
Reading	0	3	5	0	0	6	0	4	3	3
Scranton	11	5	2	----	1	5	2	8	6	0
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati	16	12	16	1	2	126	12	11	12	8
Cleveland	86	31	17	10	3	47	339	25	40	17
Columbus	5	3	3	0	0	3	0	7	7	6
Toledo	0	5	3	----	1	35	0	9	13	23
Indiana:										
Fort Wayne	----	3	4	0	0	4	----	1	2	7
Indianapolis	45	10	6	----	1	43	268	13	13	4
South Bend	----	1	10	0	0	3	----	2	3	10
Terre Haute	3	1	0	0	0	10	0	1	3	0
Illinois:										
Chicago	177	123	71	46	7	109	131	102	133	116
Cicero	11	2	0	0	0	0	34	0	1	0
Peoria	----	1	2	0	0	1	----	3	4	4
Springfield	11	1	0	0	0	0	0	4	1	1
Michigan:										
Detroit	84	63	59	1	4	133	106	41	78	104
Flint	7	7	3	----	2	24	33	9	6	5
Grand Rapids	----	2	11	1	0	1	----	5	8	10
Saginaw	1	1	0	0	0	20	3	0	3	62

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
EAST NORTH CENTRAL—contd.										
Wisconsin:										
Madison	15	1	1	0	----	2	1	----	2	4
Milwaukee	58	15	14	0	0	36	----	0	33	32
Racine	10	1	3	0	0	0	2	0	4	21
Superior	----	1	0	0	0	0	----	0	2	2
WEST NORTH CENTRAL.										
Minnesota:										
Duluth	----	2	0	0	0	2	----	0	4	9
Minneapolis	----	15	19	----	1	18	----	11	31	66
St. Paul	----	12	23	0	0	42	----	10	22	67
Iowa:										
Davenport	----	1	6	0	----	0	----	----	4	3
Des Moines	0	3	7	0	----	9	0	----	10	1
Sioux City	0	2	1	0	----	2	0	----	2	0
Waterloo	0	1	0	0	----	3	17	----	4	5
Missouri:										
St. Joseph	2	2	2	0	0	14	1	10	3	0
St. Louis	38	55	43	0	0	31	46	----	26	84
North Dakota:										
Fargo	0	1	0	0	0	0	0	0	3	0
Grand Forks	0	0	0	0	0	9	0	0	0	0
South Dakota:										
Sioux Falls	2	2	0	0	0	5	0	0	4	0
Nebraska:										
Lincoln	----	1	2	0	0	73	----	2	4	2
Omaha	5	6	4	0	0	141	0	7	14	2
Kansas:										
Topeka	4	1	2	0	0	358	0	1	2	2
Wichita	15	1	10	0	0	350	213	6	2	1
SOUTH ATLANTIC.										
Delaware:										
Wilmington	----	2	2	0	0	0	----	4	1	12
Maryland:										
Baltimore	223	24	21	43	5	184	25	45	34	108
Cumberland	----	1	0	0	0	0	----	1	1	3
Frederick	----	1	0	2	0	27	----	0	0	4
District of Col.:										
Washington	73	12	8	4	2	5	0	35	20	48
Virginia:										
Lynchburg	2	0	2	0	0	1	0	0	0	0
Norfolk	11	1	1	0	0	79	1	5	2	3
Richmond	5	2	0	----	1	34	1	9	3	4
Roanoke	7	1	0	0	1	0	3	1	1	0
West Virginia:										
Charleston	6	1	0	0	0	0	0	1	1	2
Huntington	----	0	0	0	0	0	----	4	1	0
Wheeling	6	1	3	0	0	7	3	7	1	3
North Carolina:										
Raleigh	20	0	0	----	1	9	0	4	0	1
Wilmigton	5	1	1	0	0	77	11	5	0	0
Winston-Salem	3	0	1	----	1	91	7	5	1	10
South Carolina:										
Charleston	1	1	1	0	0	0	1	8	0	1
Columbia	9	1	1	0	0	57	13	5	1	0
Greenville	2	0	0	0	0	107	10	4	0	0
Georgia:										
Atlanta	3	2	2	4	2	7	3	26	4	6
Brunswick	0	0	0	0	0	71	0	0	0	0
Savannah	0	1	0	6	2	21	0	6	2	0
Florida:										
St. Petersburg	5	----	0	0	0	10	0	1	----	4
Tampa	3	3	0	0	0	14	0	5	0	0

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
EAST SOUTH CENTRAL.										
Kentucky:										
Covington	0	1	1	0	0	2	0	4	1	9
Lexington	1	0	0	0	0	20	0	1	1	2
Louisville	11	6	1	8	0	5	4	16	4	6
Tennessee:										
Memphis	31	4	4	3	4	45	39	18	3	9
Nashville	5	2	2	----	7	13	0	10	3	1
Alabama:										
Birmingham	10	2	1	7	3	76	16	12	1	3
Mobile	3	1	0	1	1	4	0	0	0	0
Montgomery	----	1	0	0	0	10	----	1	1	0
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	1	2	0	0	----	217	1	----	1	0
Little Rock	2	1	1	3	----	39	8	----	1	0
Louisiana:										
New Orleans	0	12	13	7	7	111	0	22	3	9
Shreveport	0	----	1	----	1	4	0	3	----	0
Oklahoma:										
Tulsa	7	2	0	0	----	13	0	----	1	1
Texas:										
Dallas	7	4	8	2	2	131	34	6	1	1
Galveston	0	1	0	0	0	14	0	1	0	0
Houston	----	1	5	----	1	132	----	10	1	0
San Antonio	0	2	6	----	1	45	1	20	0	1
MOUNTAIN.										
Montana:										
Billings	0	1	0	0	0	5	0	1	1	1
Great Falls	8	1	1	0	0	62	0	1	1	6
Helena	0	----	0	0	0	60	0	0	----	0
Missoula	0	0	3	0	0	15	0	0	2	0
Idaho:										
Boise	2	0	0	0	0	92	0	0	1	0
Colorado:										
Denver	25	8	17	----	4	107	5	10	10	13
Pueblo	6	2	3	0	0	96	9	0	2	4
New Mexico:										
Albuquerque	4	1	0	0	0	18	0	1	6	0
Utah:										
Salt Lake City	17	2	0	0	0	367	10	2	5	1
Nevada:										
Reno	0	0	0	0	0	15	0	0	0	0
PACIFIC.										
Washington:										
Seattle	4	4	8	0	----	164	9	----	9	10
Spokane	15	3	2	0	----	22	0	----	2	15
Tacoma	3	1	4	0	----	120	7	----	2	6
Oregon:										
Portland	12	3	17	0	0	23	4	17	6	3
California:										
Los Angeles	----	22	85	10	2	299	----	22	13	82
Sacramento	----	1	12	0	0	8	----	4	2	2
San Francisco	38	25	38	3	0	110	13	8	15	27

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Population July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
NEW ENGLAND.										
Maine:										
Lewiston	33,790	0	0	0	1	0	0	0	0	10
Portland	73,129	0	0	0	1	0	1	0	5	11
New Hampshire:										
Nashua	29,234	0	0	0	0	0	0	0	----	6
Vermont:										
Barre	*10,008	0	0	0	0	0	0	0	1	6
Burlington	23,613	0	1	0	0	0	0	0	0	9
Massachusetts:										
Boston	770,400	0	0	0	22	2	5	1	9	240
Fall River	120,912	0	0	0	4	1	0	0	1	38
Springfield	144,227	0	0	0	2	0	0	0	1	45
Worcester	191,927	0	0	0	6	0	0	0	----	62
Rhode Island:										
Pawtucket	68,799	0	0	0	0	0	0	0	----	20
Providence	242,378	0	0	0	6	0	0	0	0	88
Connecticut:										
Bridgeport	*143,555	0	0	0	0	0	0	0	0	42
Hartford	*138,036	0	0	0	2	0	0	0	----	37
New Haven	172,967	0	0	0	2	0	1	0	2	51
MIDDLE ATLANTIC.										
New York:										
Buffalo	536,718	0	0	0	13	1	0	0	46	131
New York	5,927,625	0	1	0	[1]103	9	12	2	137	1,715
Rochester	317,867	0	0	0	1	0	0	0	5	59
Syracuse	184,511	0	0	0	1	1	0	0	5	47
New Jersey:										
Camden	124,157	0	0	0	2	0	0	0	----	42
Newark	438,699	0	0	0	6	0	0	0	11	122
Trenton	127,390	0	0	0	2	1	0	0	1	39
Pennsylvania:										
Philadelphia	1,922,788	0	0	0	50	4	4	0	68	587
Pittsburgh	613,442	0	0	0	14	1	0	0	61	274
Reading	110,917	0	0	0	1	0	0	0	4	39
Scranton	140,636	0	0	0	2	0	0	0	0	49
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati	406,312	2	2	0	11	0	0	0	30	110
Cleveland	888,519	2	10	0	25	1	5	0	45	195
Columbus	261,082	0	0	0	5	0	0	0	2	79
Toledo	268,338	4	36	0	8	2	1	0	0	77
Indiana:										
Fort Wayne	93,573	1	1	0	0	0	0	0	----	23
Indianapolis	342,718	3	28	0	6	0	0	0	36	107
South Bend	76,709	1	0	0	0	0	0	0	----	17
Terre Haute	68,939	1	0	0	0	0	0	0	14	21
Illinois:										
Chicago	2,886,121	2	17	0	53	3	3	0	33	764
Cicero	55,968	0	0	0	0	0	0	0	4	6
Peoria	79,675	1	1	0	0	0	1	0	----	21
Springfield	61,833	1	0	0	1	0	0	0	3	21
Michigan:										
Detroit	995,668	6	81	1	29	3	0	1	19	281
Flint	117,968	1	5	0	0	0	0	0	4	27
Grand Rapids	145,947	1	3	0	5	1	0	0	----	40
Saginaw	69,754	0	0	0	3	0	0	0	7	18
Wisconsin:										
Madison	42,519	1	0	----	----	0	0	----	2	----
Milwaukee	484,595	4	0	0	2	1	0	0	4	----
Racine	64,393	1	3	0	1	0	0	0	1	16
Superior	*39,671	3	10	0	1	0	0	0	0	10

*Population Jan. 1, 1920.

[1] Pulmonary only.

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Population July 1, 1923, estimated.	Smallpox.			Tuberculosis deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
WEST NORTH CENTRAL.										
Minnesota:										
Duluth	106,289	2	7	1	0	0	0	0	----	15
Minneapolis	409,125	20	0	0	9	1	0	0	----	96
St. Paul	241,891	10	32	0	4	0	1	0	----	69
Iowa:										
Davenport	61,262	5	11	----	----	0	0	----	----	----
Des Moines	140,923	3	0	----	----	0	0	----	0	----
Sioux City	79,662	3	0	----	----	0	0	----	0	----
Waterloo	39,667	0	0	----	----	0	0	----	11	----
Missouri:										
St. Joseph	78,232	5	0	0	2	0	0	0	3	35
St. Louis	803,853	3	3	0	16	1	2	0	43	220
North Dakota:										
Fargo	24,841	0	0	0	0	0	0	0	0	8
Grand Forks	14,547	1	0	----	----	0	0	----	0	----
South Dakota:										
Sioux Falls	29,206	1	0	0	0	0	0	0	----	4
Nebraska:										
Lincoln	58,761	3	0	0	2	0	0	0	----	24
Omaha	204,382	9	1	0	1	0	0	0	----	48
Kansas:										
Topeka	52,555	2	0	0	0	0	0	0	0	10
Wichita	79,261	6	13	0	0	0	0	0	16	29
SOUTH ATLANTIC.										
Delaware:										
Wilmington	117,728	0	0	0	2	0	0	0	----	37
Maryland:										
Baltimore	773,580	0	0	0	25	3	0	0	29	250
Cumberland	32,361	0	0	0	0	0	0	0	----	11
Frederick	11,301	0	0	0	0	0	0	0	----	5
District of Columbia:										
Washington	*437,571	0	3	0	0	1	0	0	15	163
Virginia:										
Lynchburg	30,277	0	0	0	0	0	0	0	22	8
Norfolk	159,089	0	0	0	3	0	0	0	7	----
Richmond	181,044	0	0	0	5	0	0	0	1	66
Roanoke	85,502	0	0	0	1	0	0	0	0	10
West Virginia:										
Charleston	45,597	0	10	0	0	1	0	0	6	15
Huntington	57,918	0	0	0	1	0	0	0	----	22
Wheeling	*56,208	0	0	0	0	0	0	0	1	23
North Carolina:										
Raleigh	29,171	0	8	0	1	0	0	0	3	14
Wilmington	35,719	1	0	0	1	0	0	0	1	15
Winston-Salem	56,230	4	0	0	5	0	0	0	13	24
South Carolina:										
Charleston	71,245	0	5	0	1	0	0	0	4	33
Columbia	39,688	0	1	0	0	0	0	0	1	35
Greenville	25,780	1	3	0	1	0	0	0	0	15
Georgia:										
Atlanta	222,963	3	85	0	11	1	0	0	0	105
Brunswick	15,937	1	0	0	0	0	1	0	0	2
Savannah	89,448	0	2	0	3	0	0	0	0	46
Florida:										
St. Petersburg	24,403	----	0	0	0	----	0	0	0	10
Tampa	56,050	1	0	0	0	2	2	1	0	22

* Population Jan. 1, 1920.

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Population July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
EAST SOUTH CENTRAL.										
Kentucky:										
Covington	57,877	0	0	0	2	0	0	0	1	18
Lexington	43,673	0	0	0	2	0	0	0	1	14
Louisville	257,671	1	0	0	12	0	0	0	2	97
Tennessee:										
Memphis	170,067	4	7	0	4	0	1	0	13	81
Nashville	121,128	1	1	0	5	0	0	0	2	63
Alabama:										
Birmingham	195,901	1	27	0	6	1	0	0	0	73
Mobile	63,858	2	0	0	2	0	0	0	0	12
Montgomery	45,383	0	0	0	1	0	0	0	----	12
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	30,635	1	0	----	----	0	0	----	15	----
Little Rock	70,916	0	0	----	----	1	0	----	3	----
Louisiana:										
New Orleans	404,575	2	0	0	13	2	1	0	0	178
Shreveport	54,590	----	2	0	1	----	1	0	0	20
Oklahoma:										
Tulsa	102,018	2	4	----	----	0	0	----	0	----
Texas:										
Dallas	177,274	8	0	0	5	0	0	0	5	63
Galveston	46,877	1	0	0	1	1	0	0	0	12
Houston	154,970	1	0	0	4	0	0	0	----	52
San Antonio	184,727	0	0	0	8	1	0	0	1	64
MOUNTAIN.										
Montana:										
Billings	16,927	0	0	0	0	0	0	0	0	3
Great Falls	27,787	3	3	0	0	0	0	0	7	3
Helena	*12,037	----	0	0	0	----	0	0	0	9
Missoula	*12,668	0	3	0	0	0	0	0	0	12
Idaho:										
Boise	22,806	0	5	0	0	0	0	0	0	2
Colorado:										
Denver	272,031	8	0	0	11	0	1	1	6	82
Pueblo	43,519	0	0	0	1	0	1	0	0	7
New Mexico:										
Albuquerque	16,648	0	0	0	6	0	0	0	0	10
Utah:										
Salt Lake City	126,241	5	0	0	1	0	0	0	2	25
Nevada:										
Reno	12,429	1	0	0	0	0	0	0	0	6
PACIFIC.										
Washington:										
Seattle	*315,685	8	1	----	----	0	1	----	5	----
Spokane	104,573	18	20	----	----	0	0	----	3	----
Tacoma	101,731	3	2	----	----	1	1	----	1	----
Oregon:										
Portland	273,621	9	23	0	3	1	1	0	1	----
California:										
Los Angeles	666,853	2	81	0	34	2	1	0	----	234
Sacramento	69,950	1	1	0	2	0	1	0	----	23
San Francisco	539,038	3	1	0	14	2	0	0	1	148

* Population Jan. 1, 1920.

City reports for week ended March 8, 1924—Continued.

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, est. expectancy.	Cases.	Deaths.
NEW ENGLAND.									
Massachusetts:									
Boston	2	2	1	0	0	0	0	0	0
Fall River	0	1	0	0	0	0	0	0	0
Connecticut:									
Bridgeport	0	0	2	0	0	0	0	0	0
New Haven	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC.									
New York:									
New York	2	2	9	4	0	0	1	1	0
Rochester	0	0	1	0	0	0	0	0	0
New Jersey:									
Newark	2	2	0	0	0	0	0	1	0
Trenton	0	0	0	1	0	0	0	0	0
Pennsylvania:									
Philadelphia	0	0	0	1	0	0	0	0	0
EAST NORTH CENTRAL.									
Ohio:									
Columbus	0	0	0	1	0	0	0	0	0
Michigan:									
Flint	1	0	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee	0	0	1	0	0	0	0	1	1
WEST NORTH CENTRAL.									
Minnesota:									
Duluth	0	1	0	0	0	0	0	0	0
Missouri:									
St. Joseph	0	0	2	0	0	0	0	0	0
SOUTH ATLANTIC.									
Delaware:									
Wilmington	1	1	0	0	0	0	0	0	0
Maryland:									
Baltimore	0	0	1	0	0	0	1	0	0
District of Columbia:									
Washington	0	0	1	1	0	0	0	0	0
North Carolina:									
Winston-Salem	0	0	0	0	2	0	0	0	0
Florida:									
Tampa	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL.									
Kentucky:									
Louisville	0	1	0	0	0	0	0	0	0
WEST SOUTH CENTRAL.									
Louisana:									
New Orleans	1	0	0	0	0	0	0	0	0
PACIFIC.									
California:									
Los Angeles	0	1	0	0	0	0	0	1	0
San Francisco	1	0	1	0	0	0	0	0	0

The following table gives a summary of the reports from 105 cities for the eight-week period ended March 8, 1924. The cities included in this table are those whose reports have been published for all eight weeks in the Public Health Reports. Eight of these cities

did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

Summary of weekly reports from cities, January 13 to March 8, 1924.

DIPHTHERIA CASES.

	1924, week ended—							
	Jan. 19.	Jan. 26.	Feb. 2.	Feb. 9.	Feb. 16.	Feb. 23.	Mar. 1.	Mar. 8.
Total	1,453	1,387	1,288	1,305	1,226	1,075	1,103	1,024
New England	120	141	161	136	115	109	125	86
Middle Atlantic	488	479	410	490	434	394	388	351
East North Central	333	305	291	284	247	225	230	218
West North Central	125	124	125	97	128	102	86	110
South Atlantic	112	72	59	50	57	31	54	43
East South Central	15	17	19	13	17	13	11	9
West South Central	38	41	38	33	37	34	34	34
Mountain	19	27	21	21	23	27	19	24
Pacific	193	181	164	181	168	140	156	149

MEASLES CASES.

Total	5,479	5,571	5,908	5,794	6,577	6,002	7,258	7,101
New England	176	170	227	265	334	294	460	353
Middle Atlantic	699	770	899	1,004	1,183	1,388	1,838	1,971
East North Central	328	296	330	292	378	322	476	541
West North Central	383	411	522	643	814	835	1,056	1,045
South Atlantic	499	507	556	508	655	578	683	801
East South Central	98	121	118	98	118	163	263	155
West South Central	370	552	564	511	710	738	781	693
Mountain	434	723	1,005	975	1,216	871	879	819
Pacific	2,492	2,021	1,687	1,498	1,169	813	813	723

SCARLET FEVER CASES.

Total	1,883	1,925	1,858	1,934	1,798	1,677	1,873	1,928
New England	330	327	368	307	276	301	330	388
Middle Atlantic	461	530	492	572	525	450	519	532
East North Central	487	419	405	426	383	317	380	347
West North Central	227	245	227	248	258	272	250	246
South Atlantic	128	142	145	183	157	142	188	209
East South Central	26	27	12	18	14	12	12	28
West South Central	21	15	19	19	12	8	9	11
Mountain	36	24	24	27	41	24	30	25
Pacific	167	196	166	134	132	151	155	142

SMALLPOX CASES.

Total	454	379	368	427	473	486	521	488
New England	0	1	0	0	0	0	0	0
Middle Atlantic	1	6	3	0	0	0	0	1
East North Central	92	64	74	87	143	101	145	160
West North Central	45	50	36	59	49	65	51	56
South Atlantic	81	55	58	118	117	117	121	117
East South Central	4	3	5	8	5	9	35	35
West South Central	6	3	12	6	12	14	4	2
Mountain	4	2	2	4	3	2	11	11
Pacific	221	195	178	145	144	178	154	106

Summary of weekly reports from cities, January 13 to March 8, 1924—Continued.

TYPHOID FEVER CASES.

	1924, week ended—							
	Jan. 19.	Jan. 26.	Feb. 2.	Feb. 9.	Feb. 16.	Feb. 23.	Mar. 1.	Mar. 8.
Total	77	69	78	76	74	52	49	46
New England	11	1	5	0	3	5	8	7
Middle Atlantic	30	21	26	24	23	8	11	16
East North Central	16	18	14	8	18	8	9	8
West North Central	3	2	5	7	2	0	1	3
South Atlantic	7	11	18	15	7	11	7	3
East South Central	3	8	1	2	2	4	4	1
West South Central	6	4	1	10	3	6	3	2
Mountain	0	0	1	1	4	2	1	2
Pacific	1	4	7	9	12	8	5	4

INFLUENZA DEATHS.

Total	68	70	82	100	92	99	96	119
New England	2	6	3	3	5	4	3	5
Middle Atlantic	32	14	29	33	30	36	33	45
East North Central	11	23	18	19	13	18	14	19
West North Central	10	4	5	6	6	4	2	2
South Atlantic	1	6	5	14	17	10	13	15
East South Central	4	3	7	13	6	12	10	15
West South Central	2	6	10	7	11	8	15	12
Mountain	0	1	0	2	0	2	2	4
Pacific	6	7	5	3	4	5	4	2

PNEUMONIA DEATHS.

Total	1,054	1,002	1,120	1,064	1,125	1,191	1,165	1,217
New England	78	51	73	73	79	87	84	73
Middle Atlantic	422	409	463	421	407	461	469	516
East North Central	202	177	222	216	255	226	235	221
West North Central	73	70	64	46	52	50	49	59
South Atlantic	132	129	123	134	146	171	166	177
East South Central	30	50	62	63	65	65	55	61
West South Central	47	60	64	53	59	71	55	62
Mountain	30	20	21	24	30	27	19	14
Pacific	40	36	28	34	32	33	33	34

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923.

Group of cities.	Number of cities reporting—		Aggregate population of cities reporting—	
	Cases.	Deaths.	Cases.	Deaths.
Total	105	97	28,898,350	28,140,934
New England	12	12	2,098,746	2,098,746
Middle Atlantic	10	10	10,304,114	10,304,114
East North Central	17	17	7,032,535	7,032,535
West North Central	14	11	2,515,330	2,381,454
South Atlantic	22	22	2,566,901	2,566,901
East South Central	7	7	911,885	911,885
West South Central	8	6	1,124,564	1,023,013
Mountain	9	9	546,445	546,445
Pacific	6	3	1,797,830	1,275,841

FOREIGN AND INSULAR.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Mar. 1–10, 1924.		Remaining under treatment Mar. 10, 1924.
	New cases.	Deaths.	
Cerebrospinal meningitis			[1] 2
Chicken pox	75		[2] 71
Diphtheria	4		4
Leprosy			14
Malaria	3		[3] 15
Measles	3		4
Paratyphoid fever	1		1
Typhoid fever	13	5	[4] 29

[1] From the interior, 1.
[2] 50 cases in the Penitentiary (Presidio), isolated.
[3] From the interior, 8.
[4] From the interior, 12.

DOMINICAN REPUBLIC.

Typhoid Fever—Haina.

Under date of January 23, 1924, typhoid fever was reported present, with many cases, among the rural population along the Haina River, Dominican Republic.

ECUADOR.

Plague—Smallpox.

Plague and smallpox have been reported in Ecuador as follows:

Plague.—December 1–31, 1923: At Guayaquil, 41 cases, 11 deaths. January, 1924: At Guayaquil, 50 cases, 16 deaths; Quevedo, 3 cases, 2 deaths. February 1–15, 1924: At Guayaquil, 21 cases, 7 deaths.

Smallpox.—Guayaquil: December 1–31, 1923, one case; January, 1924, one case; February 1–15, 1924, one case.

Plague-Infected Rodents—Guayaquil.

The finding of plague-infected rodents at Guayaquil has been reported as follows: Month of December, 1923— rats taken, 34,924; found infected, 96. January, 1924—rats taken, 36,650; found infected, 247. February 1–15, 1924—rats taken, 20,479; found infected, 90.

EGYPT.

Plague—January 1 to December 31, 1923.

During the period January 1 to December 31, 1923, there were reported in Egypt 1,519, cases of plague, with 725 deaths. The occurrence in cities was reported as follows: *Alexandria*, 65 cases, with 33 deaths; *Cairo*, 2 cases, with 2 deaths; *Port Said*, 51 cases, with 29 deaths; *Suez*, 47 cases, with 24 deaths. The remaining cases were distributed in 11 Provinces, with the greatest number of cases notified in the Province of Assiout, viz, 370 cases, deaths 211, and the lowest number in the Province of Dakahlieh, viz, 2 cases, with 2 deaths. For distribution of occurrence according to cities and Provinces, see page 644.

JAPAN.

Typhoid Fever—Tokyo—Yokohama.

Typhoid fever prevalence has been reported at Tokyo and Yokohama, Japan, as follows: *Tokyo*—January 27–February 9, 1924, 216 cases, with 41 deaths; *Yokohama*—two weeks ended February 17, 1924, 177 cases, with 41 deaths.

LATVIA.

Communicable Diseases—December, 1923.

Communicable diseases were reported in the Republic of Latvia, during the month of December, 1923, as follows:

Disease.	Cases.	Remarks.
Cerebrospinal meningitis	1	
Diphtheria	40	
Measles	38	
Scarlet fever	156	
Smallpox	2	
Typhoid fever	86	
Typhus fever	9	Paratyphus fever; cases, 3.
Whooping cough	16	

Population, 1,503,193.

Anthrax—Influenza.

During the period under report, 1 case of anthrax and 18 cases of influenza were reported in the Republic of Latvia.

MADAGASCAR.

Plague—Tananarive Province—December 16–31, 1923.

During the period December 16–31, 1923, 114 cases of plague, with 96 deaths, were reported in the Province of Tananarive, Madagascar. Of these, 10 cases, with 10 deaths, occurred in the town of Tananarive, the remaining cases having been reported from other localities in the Province. The types of the disease were stated to be bubonic, pneumonic, and septicemic.

MALTA.

Communicable Diseases—February 1–15, 1924.

Communicable diseases were reported in the Island of Malta during the period February 1 to 15, 1924, as follows: Bronchopneumonia, 8 cases; chicken pox, 3 cases; influenza, 217 cases; pneumonia, 2 cases; trachoma, 13 cases; undulant fever, 18 cases; whooping cough, 90 cases.

MEXICO.

Smallpox—Tampico.

Reports received of disease prevalence at Tampico, Mexico, show the presence from January 21 to February 29, 1924, of 24 cases of smallpox, of which 9 cases were stated to have been brought in from Irapuato by soldiers and 1 case to have originated at La Barra.

RUSSIA.

Plague.

Information relative to plague conditions in Soviet Russia, dated February 10, 1924, and transmitted through official sources, shows as follows: In Bukeeve Province, and mainly in the former maritime division of Astrachan Province, 66 plague centers have been reported. From the outbreak of the epidemic, October 1, 1923, to February 4, 1924, 319 cases, with 294 deaths, were notified. In the Ural Provinces, viz, Khrasamarsky, Gorsky, Indersky, and Ispulsky Volosts, four centers have been reported, with 90 cases. At Yidyko, Mochzhny settlement, 85 versts southwest of Astrakhan, six centers have been reported, with 33 cases recorded. One death was reported to have occurred in the person of a physician of the medical working staff. In all, 441 cases of plague have been notified. The outbreak was stated to be the most severe which has occurred since the year 1913.

SIBERIA.

Pneumonic Plague—Chita (Transbaikalia).

Information has been received under date of January 15, 1924, of the occurrence at Chita, Transbaikalia, Siberia, of two cases of pneumonic plague among the scientific staff of the veterinary institute at that place. Both cases terminated fatally.

SPAIN.

Plague—Malaga—December, 1923.

Information dated January 29, 1924, and received under date of February 5, 1924, shows the occurrence at Malaga, Spain, during the month of December, 1923, of four cases of plague.

Vital Statistics, 1923—Barcelona.

During the year 1923 there were reported 16,277 deaths (22.6 per 1,000 population) and 18,309 births (25.4 per 1,000 population) in Barcelona, Spain (population, 721,526). It was stated that both the total number of deaths and the total number of births showed an increase over the figures for 1922. The following table gives the number of deaths by age groups:

Age group.	Number of deaths.	Per cent of total deaths.
Up to 1 year	2,105	12.9
1 to 4 years	1,448	8.9
5 to 19 years	1,121	6.9
20 to 39 years	2,582	15.9
40 to 59 years	3,403	20.9
60 years and over	5,618	34.5

Tuberculosis was reported to have caused 1,491 deaths, representing a rate of 2.07 per 1,000 population. Of these deaths, 147 were in persons under five years of age.

Typhoid fever caused 379 deaths, the maximum for any one month, viz, 50, being registered in September.

Influenza was reported as the cause of 70 deaths, the maximum number of deaths from this cause occurring in May and the minimum in July.

Smallpox caused 18 deaths. In the municipal dispensaries, 25,171 vaccinations and revaccinations were performed during the year.

Syphilis was reported to have been responsible for 0.36 per cent of the total number of deaths, 40 deaths from this cause occurring in infants under 1 year of age.

TRINIDAD.

Typhoid Fever—Port of Spain.

Under date of March 1, 1924, unusually high incidence of typhoid fever was reported at Port of Spain, Trinidad.

UNION OF SOUTH AFRICA.

Plague—Kroonstad District—Orange Free State.

During the week ended January 26, 1924, 7 new cases of plague (4 among white population, 3 among natives), with 3 deaths (white, 1; native, 2), were reported in the Kroonstad District, Orange Free State. The cases occurred on three farms and in the village of Honingspruit. One death of a case reported during the previous week was notified. The total number of cases reported from December 16, 1923, was 24 (white, 11; colored, 13), with 15 deaths (white, 4; native, 11).

Infection Among Wild Rodents.

Plague infection in virulent form has been shown to be widespread among wild rodents in the tract of country bounded by the Kroonstad-Vierfontein–Klerksdorp railway line, the Vaal River, and the Johannesburg-Bloemfontein main line. Veld rodents were stated to be numerous in this area, and fleas were stated to be prevalent. The facts noted in the occurrence of the human cases indicate rodent infection through fleas.

VIRGIN ISLANDS.

Communicable Diseases—January, 1924.

Communicable diseases were reported in the Virgin Islands of the United States during the month of January, 1924, as follows:

Island and disease.	Cases.	Remarks.
St. Thomas and St. John:		
Chancroid	1	Imported.
Dengue	2	
Dysentery	3	Unclassified.
Gonorrhea	7	Imported, 4.
Sprue	1	
St. Croix:		
Dysentery	1	Entamebic.
Filariasis	11	Bancrofti.
Gonorrhea	3	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended March 28, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Dec. 23–29, 1923: Cases, 1,486; deaths, 1,020.
Do				Dec. 30, 1923–Jan. 12, 1924: Cases, 2,625; deaths, 1,737.
Calcutta	Jan. 27–Feb. 9	25	23	
Madras	Feb. 9–16	4	4	
Rangoon	Feb. 3–9	1	1	

PLAGUE.

Ceylon:				
Colombo	Feb. 3–9	4	7	Plague rodents, 2.
Ecuador:				
Guayaquil	Dec. 1–31	41	11	Rats taken, 34,924; found plague infected, 96.
Do	Jan. 1–31	50	18	Rats taken, 36,650; found infected, 247.
Do	Feb. 1–15	21	7	Rats taken, 20,479; found infected, 90.
Quevedo	Jan. 1–31	3	2	
Egypt				Jan. 1–Dec. 31, 1923: Cases, 1,519; deaths, 725.
City—				
Alexandria		65	33	Last case, Nov. 29.
Cairo		2	2	Last case, Dec. 25.
Port Said		51	29	Last case, Sept. 10.
Suez		47	24	Last case, Dec. 30.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended March 28, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Province—				
Assiout		370	211	Last case, Aug. 6.
Beni-Souef		63	23	Last case, Dec. 2.
Dakhalieh		2	2	Last case, Aug. 29.
Fayoum		34	9	Last case, July 27.
Gharbieh		23	9	Last case, Dec. 12.
Girgah		337	193	Last case, Dec. 13.
Gizah		3	4	Last case, May 3.
Kalioubiah		76	10	Last case, Dec. 16.
Kena		50	34	Last case, Dec. 5.
Menoufieh		290	98	Last case, Dec. 27.
Minia		106	44	Last case, Dec. 30.
India				Dec. 23–29, 1923: Cases, 2,802; deaths, 2,002.
Do				Dec. 30, 1923–Jan. 12, 1924: Cases, 6,555; deaths, 4,706.
Karachi	Feb. 9–16	1		
Madras Presidency	do	90	64	
Rangoon	Feb. 3–9	14	14	
Madagascar:				
Tananarive Province				Dec. 16–31, 1923: Cases, 114; deaths, 96. Bubonic, pneumonic, septicemic.
Tananarive	Dec. 16–31	10	10	
Russia:				
Bukeeve Province				Oct. 1, 1923–Feb. 4, 1924: Cases, 319; deaths, 294. 66 plague centers.
Ural Provinces				Oct. 1, 1923–Feb. 4, 1924: Cases, 441. 4 plague centers.
Siberia:				
Transbaikalia—				
Chita	Jan. 27	2	2	Pneumonic. Occurring in veterinary laboratory workers.
Spain:				
Malaga	Dec. 1–31	4		
Straits Settlements:				
Singapore	Jan. 27–Feb. 2	4	3	
Union of South Africa:				
Orange Free State—				
Kroonstad District	Jan. 20–26	7	3	White, cases 4, deaths 1; colored, cases 3, deaths 2. Total, Dec. 16, 1923–Jan. 26, 1924: Cases, 24; deaths, 15 (white, cases 11, deaths, 4; colored, cases 13, deaths 11). Infection present in wild rodents.

SMALLPOX.

Canada:				
New Brunswick—				
Gloucester County	Mar. 2–8	1		
Restigouche County	do	1		
Ontario—				
Perth	Mar. 4	3		
Toronto	Mar. 2–8	2		
Windsor	Mar. 2–15	14	5	
Saskatchewan—				
Regina	Feb. 17–23	1		
China:				
Amoy	Feb. 9–16		4	
Chungking	Jan. 13–26			Present.
Manchuria—				
Harbin	Feb. 12–18	4		
Costa Rica:				
Port Limon				Feb. 25, 1924: One case of Alastrim reported.
Ecuador:				
Guayaquil	Dec. 1–31	1		
Do	Jan. 1–Feb. 15	2		
Haiti:				
Port au Prince	Feb. 24–Mar. 1		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended March 28, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Dec. 23–29, 1923: Cases, 552; deaths, 175.
Do				Dec. 30, 1923–Jan. 12, 1924: Cases, 2,865; deaths, 929.
Calcutta	Jan. 27–Feb. 9	2	2	
Karachi	Feb. 10–16	7		
Madras	Feb. 10–16	6		
Rangoon	Feb. 3–9	1	1	
Indo-China:				
Saigon	Jan. 20–26	54	32	Including 100 sq. km. of surrounding territory.
Japan:				
Kobe	Feb. 14–20	6	2	
Latvia				Dec. 1–31, 1923: Cases, 2.
Mexico:				
Mexico City	Feb. 11–17	7		Including municipalities in Federal district.
Salina Cruz	Jan. 1–31	1		
Tampico	Jan. 21–Feb. 29	24		From Irapuato, 9; La Barra, 1.
Portugal:				
Lisbon	Feb. 4–10		1	
Spain:				
Barcelona				Year 1923: Deaths, 18.
Valencia	Feb. 24–Mar. 1	17	1	
Union of South Africa:				
Cape Province	Jan. 20–26			Outbreaks.
Orange Free State	do			Do.
Transvaal	do			Do.
Johannesburg	Feb. 3–9	1		

TYPHUS FEVER.

China:				
Chungking	Jan. 13–26			Present.
Egypt:				
Alexandria	Feb. 12–25	2		
Cairo	Dec. 17–31	2	1	
Hungary:				
Budapest	Feb. 3–16	7	4	
Latvia				Dec. 1–31, 1923; Cases, 9. Paratyphus fever, cases, 3.
Mexico:				
Durango	Feb. 1–29		2	
Mexico City	Feb. 9–16		8	
Torreon	Feb. 1–29		2	
Union of South Africa:				
Orange Free State—				
Kroonstad District	Jan. 20–26			Outbreaks on two farms.
Transvaal—				
Johannesburg	Jan. 1–31	4	1	
Potschefstrom District	Jan. 20–26			Outbreaks on seven farms.

Reports Received from December 29, 1923, to March 21, 1924.[1]

CHOLERA.

China:				
Hongkong	Nov. 18–24	1		
India				Oct. 14–Dec. 22, 1923: Cases, 12,631; deaths, 8,128.
Bombay	Dec. 23–29	1	1	
Calcutta	Nov. 11–Dec. 29	85	69	
Do	Dec. 30–Jan. 26	113	93	
Madras	Nov. 25–Dec. 29	15	5	
Do	Dec. 30–Feb. 9	18	6	
Rangoon	Nov 11–Dec. 29	8	5	
Indo-China:				
Saigon	Dec. 31–Jan. 5	1	1	Including 100 square kilometers in surrounding country.
Siam:				
Bangkok	Nov. 18–Dec. 8	4	2	
Do	Dec. 31–Jan. 19	6	4	
Turkey:				
Constantinople	Dec. 2–8		1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Azores:				
St. Michael Island	Oct. 20–Nov. 10	9	5	At localities 3 to 9 miles from port of Ponta Delgada.
Bolivia:				
La Paz	Oct. 1–31		3	
Brazil:				
Bahia	Nov. 11–Dec. 22	5	3	
Do	Dec. 30–Jan. 19	4	5	
Rio de Janeiro	Jan. 20–26	1		
British East Africa:				
Kenya—				
Mombasa	Oct. 14–20	1	1	Infected rats, 2. Dec. 9–15, 1923: Cases, 4; deaths, 2; removed from vessel arrived Dec. 11, 1923.
Do	Dec. 30–Jan. 5	1	1	
Nairobi	Nov. 1–21	40		In rural districts, several hundred.
Tanganyika				To Nov. 24, 1923; Cases, 39; deaths, 25.
Uganda	Aug. 1–Oct. 31	734	719	
Entebbe	Oct. 1–Nov. 30	191	183	
Canary Islands:				
Las Palmas	Oct. 15–Nov. 15	14	14	
Santa Cruz de Teneriffe	Feb. 19	2		
San Juan de la Rambla	Dec. 11	1		Locality 52 km. from Teneriffe.
Celebes Island	Nov. 30			Epidemic.
Ceylon:				
Colombo	Nov. 11–Dec. 29	31	21	Plague rodents, 24.
Do	Dec. 30–Feb. 2	53	40	Do.
China:				
Nanking	Dec. 16–29			Present.
Do	Dec. 30–Feb. 9			Do.
Ecuador:				
Guayaquil	Nov. 16–Dec. 15	15	6	Rats taken, 35,070; found infected, 94.
Jipijapa	do			Present.
Quito	Nov. 1–30	11	1	
Vino del Milagro	Dec. 1–15	1		
Egypt				Jan. 1–Dec. 27, 1923: Cases, 1,518; deaths, 724.
City—				
Alexandria	Jan. 1–Dec. 27	65	33	
Cairo	do	2	2	
Port Said	do	51	29	
Suez	do	46	24	
Hawaii:				
Honokaa				Jan. 8–10, 1924: Three plague-infected rodents.
Paauhau				Dec. 14, 1923: One plague rat. Feb. 14, 1923: One plague rat.
India				Oct. 14–Dec. 22, 1923: Cases, 31,680; deaths, 21,776.
Bombay	Oct. 28–Dec. 22	5	5	
Do	Dec. 30–Feb. 2	6	5	
Calcutta	Dec. 23–29	1	1	
Do	Jan. 6–12	1	1	
Karachi	Nov. 11–Dec. 29	42	33	
Do	Dec. 30–Jan. 12	3	1	
Madras Presidency	Nov. 4–Dec. 29	1,657	1,021	
Do	Jan. 27–Feb. 9	313	177	
Rangoon	do	20	15	
Do	Dec. 30–Feb. 2	21	22	
Indo-China:				
Saigon	Oct. 28–Dec. 8	19	6	Including 100 square kilometers in surrounding country.
Iraq:				
Bagdad	Nov. 11–Dec. 29	8	6	
Do	Jan. 6–21	9	3	
Java				Oct. 1–Dec. 31, 1923: Deaths, 2,908.
Province—				
Djokjakarta	Oct. 1–Dec. 31		146	
Kedoe	do		1,287	
Pekalongan	do		150	
Samarang	do		430	Nov. 11–24, 1923: Cases, 2; deaths, 2. Dec. 9–15, 1923: Cases, 2; deaths, 2.
Soerabaya	do		9	
Do	Dec. 26–Jan. 7	18	18	
Soerakarta	do		886	
Madagascar:				
Tananarive Province	Oct. 1–Dec. 15	210	176	Bubonic, pneumonic, septicemic.
Tananarive town	do	64	64	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Paraguay:				
Asuncion	Dec. 18	6	4	
Peru				Nov. 1–Dec. 31, 1923: Cases, 38; deaths, 24. Jan. 1–31, 1924. Cases, 37; deaths, 15.
Locality—				
Callao	Jan. 1–31	2		
Canete	Nov. 1–30	1	1	
Chancay	Dec. 1–31	2		
Chepen	Nov. 1–30	1		
Chiclayo	Nov. 1–Dec. 31	2	1	
Chilca	Jan. 1–31	1		
Huarmey	do	6		
Lima (city)	Nov. 1–Dec. 31	22	15	
Do	Jan. 1–31	25	14	
Lima (country)	Nov. 1–Dec. 31	8	7	
Do	Jan. 1–31	3	1	
Lurin	do	2		
Portugal:				
Lisbon	Dec. 13–21	7		
Do	Dec. 31–Jan. 6		1	
Portuguese West Africa:				
Angola—				
Loanda	Oct.–Nov.	59	23	
Siam:				
Bangkok	Nov. 4–Dec. 8	3	2	
Do	Jan. 13–19	1	1	
Spain:				
Malaga	Dec. 17	2		
Straits Settlements:				
Singapore	Nov. 11–Dec. 22	4	4	
Do	Dec. 30–Jan. 12	4	4	
Syria:				
Beirut	Nov. 1–Dec. 10	3		
Do	Jan. 1–10	1		
Turkey:				
Constantinople	Dec. 2–22	6	3	
Union of South Africa:				
Cape Province—				
Uitenhage district	Dec. 9–15			Plague rodent found in vicinity Haarhoff's Kraal farm.
Orange Free State—				
Kroonstad district	Dec. 16–27	7	3	At Zandfontein farm, Bothaville area: Cases, white, 4; native, 3; deaths, white, 1; native, 2.
Do	Jan. 6–19	8	4	Occurring on neighboring farms.
Wonderfontein farm	Dec. 2–8	4		Vicinity of Hoopstad. At Hoopstad, Dec. 9–15, 1923, one death of case previously reported.
On vessels:				
———	Dec. 11	4	2	At Mombasa, British East Africa.
———	Jan. 21			At Varna, Bulgaria, from Syrian port.

SMALLPOX.

Algeria:				
Algiers	Nov. 1–30	1		
Arabia:				
Aden	Dec. 16–22	1		Imported.
Do	Jan. 13–19	1		
Belgium:				
Brussels	do	10		
Bolivia:				
La Paz	Oct. 1–Dec. 31	45	15	
Do	Jan. 1–31	6	2	
Brazil:				
Bahia	Jan. 6–12	2		
Pernambuco	Nov. 4–Dec. 1	15	3	
Do	Jan. 6–26		6	
Porto Alegre	Dec. 23–29		1	
Do	Dec. 30–Jan. 5		1	
Rio de Janeiro	Nov. 18–24	3	1	
Do	Jan. 6–26	3	1	
Sao Paulo	Sept. 3–9	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
British East Africa:				
Tanganyika Territory	Sept. 30-Oct. 27	14	1	
Do	Nov. 25-Dec. 29	8	3	
Uganda	Sept. 1-30	6	1	
Entebbe	Oct. 1-Nov. 30	4	1	
Zanzibar	Sept. 1-Oct. 31	116	18	Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported.
Canada:				
Alberta—				
Calgary	Jan. 27-Mar. 1	15		
British Columbia—				
Vancouver	Dec. 22-29	10		
Do	Dec. 30-Feb. 23	54		
Victoria	Feb. 10-Mar. 1	2		
Manitoba—				
Winnipeg	Nov. 25-Dec. 29	21		
Do	Dec. 30-Mar. 8	60		
New Brunswick—				
Fredericton				Feb. 1-29, 1924: Cases, 8.
Madawaska County	Dec. 8-15	1		
Restigouche County				Jan. 1-Feb. 29, 1924: Cases, 3.
Victoria County	Feb. 10-16	2		
Westmoreland County	do	3		
Ontario [1]				Jan. 1-Feb. 29, 1924: Cases, 176.
Fort William and Port Arthur.	Dec. 16-29	5		Occurring at Fort William.
London	Feb. 3-Mar. 1	2		
North Bay	do	1		
Toronto	Jan. 17-23	2		
Windsor [2]	Feb. 1-29	30	5	
Quebec—				
Montreal	Nov. 30-Feb. 23	7		
Saskatchewan—				
Regina	Dec. 9-15	1		
Do	Dec. 30-Feb. 9	5	1	
Ceylon:				
Colombo	Nov. 11-17	1		Port case.
Do	Jan. 20-Feb. 2	5	1	
Chile:				
Antofagasta	Jan. 6-19	4	1	
Concepcion	Oct. 1-Dec. 31		14	
Talcahuano	Nov. 26-Dec. 2	3		Dec. 22, 1923: Five cases present.
Valparaiso	Dec. 9-15		1	
China:				
Amoy	Nov. 18-Dec. 8			Present.
Do	Jan. 6-20		2	
Antung	Dec. 31-Feb. 3	2	2	
Canton	Dec. 23-Jan. 13			Do.
Chungking	Nov. 4-Dec. 29			Present and endemic.
Do	Dec. 30-Jan. 12			Present.
Foochow	Nov. 4-Dec. 15			Do.
Do	Dec. 31-Feb. 2			Do.
Hongkong	Oct. 28-Dec. 29	718	630	
Do	Dec. 30-Jan. 19	202	322	
Manchuria—				
Dairen	Dec. 31-Jan. 20	2		
Harbin	Nov. 12-Dec. 22	36		
Do	Jan. 1-28	5	5	
Nanking	Dec. 2-15			Do.
Do	Dec. 30-Jan. 26			Do.
Shanghai	Dec. 29			Prevalent.
Do	Jan. 6-Feb. 9	19	41	Cases, foreign.
Chosen (Korea):				
Chemulpo	Jan. 1-31	1		
Seoul	Nov. 1-30	1		
Colombia:				
Buenaventura	Nov. 18-Dec. 15	8		
Costa Rica:				
Port Limon	Feb. 18-24	1		

[1] A corrected report shows the occurrence of smallpox at Windsor and in the Province of Ontario during February, 1924, as follows: Windsor—30 cases with 5 deaths; Province of Ontario—126 cases, with 15 deaths (see Public Health Reports, Mar. 21, 1924, pp. 591 and 592).

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Dominican Republic:				
La Romana	Jan. 27–Feb. 2	8		
Ecuador:				
Esmeraldas	Nov. 16–30	4		
Quito	Nov. 1–30	167	26	
Egypt:				
Port Said	Nov. 24–Dec. 2	1		
Esthonia				Nov. 1–30, 1923: Cases, 32. Dec. 1–31, 1923: Cases, 6.
France:				
Cherbourg	Feb. 9–15	1		British seaman.
Greece:				
Saloniki	Oct. 22–Dec. 30		11	
Do	Dec. 31–Jan. 27	2	1	
Guadeloupe (West Indies)				Jan. 2–16, 1924: Present.
Abymes	Feb. 16			Present. Vicinity of Point à Pitre.
Basse Terre	Dec. 18			Present.
Do	Jan. 12–Feb. 16			Do.
Marie Galante Island	Dec. 18			Off shore island; present.
Do	Feb. 16			Present. Estimated 60 cases.
Moule	Jan. 12–Feb. 16			Present.
Point à Pitre	Dec. 18			Present in vicinity.
Haiti:				
Cape Haitien	Feb. 3–9	3		
Hinche	Feb. 10–16	1		
Port au Prince	Feb. 17–23	2		Developed at Limbe, Haiti.
India				Oct. 14–Dec. 22, 1923: Cases, 9,168 deaths, 2,066.
Bombay	Oct. 28–Dec. 29	55	25	
Do	Dec. 30–Feb. 2	113	53	
Calcutta	Dec. 16–29	4	4	
Do	Dec. 30–Jan. 26	3	3	
Karachi	Dec. 30–Feb. 9	4	1	
Madras	Nov. 4–Dec. 29	23	3	
Do	Dec. 30–Feb. 9	48	2	
Rangoon	Nov. 4–Dec. 29	12	4	
Do	Dec. 30–Jan. 26	4		
Indo-China:				
City—				
Saigon	Nov. 4–Dec. 29	133	74	Including 100 square kilometers
Do	Dec. 31–Jan. 19	85	56	of surrounding country.
Iraq:				
Bagdad	Oct. 24–Dec. 29	46	28	
Do	Dec. 30–Jan. 21	37	27	
Italy:				
Trieste	Feb. 17–23	4		
Turin	Feb. 18–24	1		
Jamaica				Nov. 25–Dec. 29, 1923: Cases, 115.
Do				Dec. 30, 1923–Feb. 16, 1924: Cases,
Kingston	Nov. 25–Dec. 29	3		153. Reported as alastrim.
Do	Dec. 30–Feb. 2	6		
Japan:				
Taiwan	Jan. 1–10	6		
Tokyo	Jan. 1–Feb. 3	79		
Java:				
East Java—				
Soerabaya	Oct. 23–Dec. 29	348	60	
Do	Dec. 30–Jan. 5	37	10	
West Java—				
Batavia	Oct. 27–Dec. 28	65	13	
Do	Dec. 29–Jan. 18	19	4	
Latvia				Oct. 1–31, 1923: Cases, 3. Nov. 1–30, 1923: Cases, 1. Dec. 1–31, 1923: Cases, 2.
Mexico:				
Guadalajara	Jan. 27–Feb. 23		3	
Manzanillo	Dec. 4–10	5	1	
Mexico City	Nov. 25–Dec. 29	32		Including municipalities in Federal District.
Do	Jan. 30–Feb. 9	65	23	Do.
Tampico	Jan. 27			Present among military.
Vera Cruz	Nov. 3–Dec. 30		4	
Do	Jan. 6–27	1		
Netherlands:				
Rotterdam	Jan. 20–26	3		
Palestine:				
Jaffa	Jan. 15–28	3		
Persia:				
Teheran	Sept. 24–Dec. 23		4	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Poland				Sept. 23–Dec. 8, 1923: Cases, 46; deaths, 7.
Portugal:				
Lisbon	Nov. 11–Dec. 29	19	10	Corrected report.
Do	Dec. 31–Feb. 16	45	8	
Oporto	Nov. 25–Dec. 29	39	23	
Do	Dec. 30–Feb. 23	56	32	
Portuguese East Africa:				
Lourenco Marques	Dec. 30–Jan. 5	2		
Siam:				
Bangkok	Oct. 28–Dec. 8	33	18	Nov. 25–Dec. 1, 1923: Epidemic.
Do	Dec. 30–Jan. 12	2	1	
Siberia:				
Dauria Station	Oct. 21			Present. Locality on Chita Railway, Manchurian frontier.
Sierra Leone:				
Sherbro District—				
Tagbail	Nov. 1–15	3		
Spain:				
Barcelona	Nov. 15–Dec. 26		2	
Do	Jan. 3–9		2	
Valencia	Nov. 25–Dec. 29	152	12	
Do	Dec. 30–Feb. 23	196	20	
Straits Settlements:				
Singapore	Dec. 16–29	2	1	
Do	Dec. 30–Jan. 26	3		
Switzerland:				
Basel	Jan. 27–Feb. 9	4		
Berne	Nov. 18–Dec. 22	12		Corrected.
Do	Jan. 6–Feb. 16	11		
Lucerne	Nov. 1–30	34		
Do	Dec. 1–31	26		
Zurich	Jan. 27–Feb. 2	1		
Syria:				
Aleppo	Nov. 25–Dec. 1	1		In vicinity, at Djisr Choughour.
Damascus	Nov. 16–Dec. 15	7		
Tunis:				
Tunis	Oct. 27–Nov. 2	5	1	
Do	Jan. 8–Feb. 4	3	2	
Turkey:				
Constantinople	Nov. 11–Dec. 8	3		
Do	Jan. 6–12	1		
Union of South Africa				Oct. 1–31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3.
Cape Province	Oct. 28–Dec. 8			Outbreaks.
Natal	Oct. 28–Nov. 3			Do.
Northern Rhodesia	Dec. 4–31	40	5	
Do				Jan. 1–31, 1924: Cases, 50; deaths, 11; reported from Balovale, Kalabo, and Mankoya districts.
Orange Free State	Oct. 28–Nov. 24			Do.
Transvaal	Nov. 18–Dec. 1			Do.
Johannesburg	Nov. 25–Dec. 15	3		
Uruguay:				
Montevideo	Oct. 1–31	1		
Venezuela:				
Caracas	Jan. 22			Epidemic.
On vessels:				
S. S. Torres	Jan. 14	1		At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.
S. S. Tupper	Jan. 20–26	1		At Gonaives, Haiti.
S. S. Vasari	Dec. 31	1		At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Nov. 1–Dec. 31	7	3	
Do	Jan. 1–Feb. 10	8	5	
Bolivia:				
La Paz	Oct. 1–Dec. 31	43	5	
Do	Jan. 1–31	4	1	
Bulgaria:				
Sofia				Nov. 18–Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6–Feb. 9, 1924: Paratyphus fever, cases, 6.
Canary Islands:				
Teneriffe	Jan. 14–Feb. 17		2	
Chile:				
Antofagasta	Dec. 2–8	4		
Concepcion	Oct. 1–Nov. 30		4	Dec. 11–24, 1923: Deaths, 3.
Do	Jan. 8–28	2	2	In district, at 12 localities, 92 cases.
Iquique	Jan. 20–26		1	
Talcahuano				Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.
Do	Dec. 31–Feb. 9	3		
Valparaiso	Nov. 25–Dec. 15		29	Dec. 24, 1923: In hospital, 34 cases.
China:				
Antung	Nov. 12–Dec. 30	5		
Chungking	Nov. 18–24			Present.
Do	Dec. 16–29			Endemic
Do	Dec. 30–Jan. 12			Do.
Ecuador:				
Quito	Nov. 1–30	14	1	
Egypt:				
Alexandria	Nov. 19–Dec. 23	3		
Do	Jan. 8–28	2		
Cairo	Sept. 10–Dec. 16	37	10	
Esthonia				Nov. 1–30, 1923: Paratyphus fever, cases, 8. Dec. 1–31, 1923: Typhus fever, cases, 15. Paratyphus, cases, 4.
Finland				Dec. 1–15, 1923: Paratyphus fever, cases, 15.
Germany:				
Coblenz	Jan. 27–Feb. 2	1		
Greece:				
Athens	Jan. 11–20		1	
Saloniki	Nov. 26–Dec. 30	7	3	
Hungary				July 1–Aug. 31, 1923: Cases, 24.
Budapest	Jan. 27–Feb. 2	4	2	
Java:				
East Java—				
Soerabaya	Dec. 9–29	12		
Do	Dec. 30–Jan. 5	2		
Latvia				Oct. 1–31, 1923: Cases, 12; paratyphus fever, 7; recurrent typhus, 3. Nov. 1–30, 1923: Cases, 1; paratyphus fever, 2 cases. Dec. 1–31, 1923: Cases, 9; paratyphus, cases, 3.
Mexico:				
Durango	Dec. 1–31		2	
Do	Jan. 1–31		1	
Guadalajara	Jan. 27–Feb. 16		2	
Mexico City	Nov. 25–Dec. 29	86		Including municipalities in Federal district.
Do	Dec. 30–Feb. 9	27		Do.
San Luis Potosi	Jan. 17–23		1	
Norway:				
Stavanger	Dec. 25–31	1		
Palestine:				
Jaffa	Jan. 1–21	3		
Persia:				
Teheran	Sept. 24–Oct. 23		1	
Poland				Sept. 23–Dec. 8, 1923: Cases, 581; deaths, 49; recurrent typhus, cases, 49; deaths, 1.
Portugal:				
Oporto	Jan. 27–Feb. 2	2		
Rumania:				
Kishineff District	Nov. 1–Dec. 31	15		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to March 21, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Barcelona	Nov. 29–Dec. 12		2	
Do	Jan. 3–Feb. 13		5	
Madrid	Dec. 1–31		7	
Syria:				
Damascus	Jan. 27–Feb. 2	1		
Tunis:				
Tunis	Feb. 5–11	1		
Turkey:				
Constantinople	Nov. 11–Dec. 29	15	1	
Do	Dec. 30–Jan. 26	6		
Union of South Africa				Oct. 1–31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths.
Cape Province				Oct. 1–31, 1923: Colored, cases, 245; deaths, 47.
Do	Oct. 28–Dec. 8			Outbreaks.
Natal				Oct. 1–31, 1923: Colored, cases, 4; deaths, 3.
Do	Oct. 28–Nov. 3			Outbreaks.
Durban	Nov. 24–Dec. 1	73		Cases occurring among native stevedores in the harbor area of the port and confined to one barracks.
Orange Free State				Oct. 1–31, 1923: Colored, cases, 25; deaths, 8.
Do	Dec. 15			Outbreaks.
Transvaal				Oct. 1–31, 1923: Colored, cases, 13.
Do	Oct. 28–Dec. 1			Outbreaks.
Johannesburg	Oct. 1–Dec. 31	3	4	
Do	Jan. 6–Feb. 2	5		
Venezuela:				
Maracaibo	Dec. 16–22		1	
Yugoslavia:				
Croatia—				
Zagreb	Dec. 2–15	3		
Serbia—				
Belgrade	Nov. 25–Dec. 1	1		

YELLOW FEVER.

Brazil:				
Pernambuco City	Nov. 16	3	2	

×